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Studies are organized by subject matter like tobacco use surveillance (surveys and reports); tobacco-related mortality and morbidity information including cancerous and non-cancerous diseases; tobacco control interventions including policy measures, legislations, and taxation; reports on tobacco promotion, advertising and sponsorship; and economics of the tobacco including studies on the interference of tobacco industry.

An annotated bibliography of scientific studies done on tobacco topic in WHO South-East Asia Region countries

2003–2014

(Surveillance, health effects, economics, and control efforts)
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2003–2014

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Appreciate contribution from Ms Anuja Upadhyay and Dr Nihal Singh.

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Preface

Data based evidence on magnitude and pattern of Morbidity and Mortality attributable to Tobacco use is often scarce and scattered. It is more so when tobacco is used in various forms as smokeless (perhaps even more harmful to health than smoking). Although WHO guided surveys to determine the prevalence of all known types of tobacco use have been and continue to be carried out in almost all countries of WHO south-East Asia Region, none we know of has been done in a systematic manner on such a larger scale in SEA Region on disease burden due to tobacco use.

The tobacco, what began as a pride of man using for self in varied forms and prestige in offering to others as a social etiquette for generations up until recently, has been found by scientific studies injurious to health. This scientific evidence that tobacco use in any form has adverse effect on health was the basis on which WHO's Framework Convention on Tobacco Control (FCTC) and Tobacco Free Initiative came into existence to monitor and control tobacco use besides continuing search for further evidence to establish without any doubt that tobacco is a major risk factor for triggering certain diseases leading to disabilities and deaths.

This being so, the focused studies (though small and sparse) done and published by academicians, clinicians, epidemiologists and health scientists over the years in SEAR countries are even of more relevance to look at until a comprehensive survey is done for this purpose.

While abstracts of all about 1000 studies done on any aspect of tobacco use in SEAR countries and published in various Journals are presented in Part-I of this publication, only those on tobacco related morbidity and mortality are tabulated and analyzed in Part-II.

Since most of these studies were on prevalence and pattern of tobacco use and other elements of WHO's MPOWER strategy for tobacco control, only abstracts related to tobacco attributed morbidity and mortality were selected for Part-II. All SEAR countries had studies on various aspects of tobacco use., only six countries (Bangladesh, India, Indonesia, Nepal, Sri Lanka, and Thailand) had on morbidity and mortality as well.

The reference years of most of these studies were 2003 - 2014, a few were done in 1990s and 1980s. Some of the morbidity and mortality related studies were general with casual mention of tobacco, we selected only those which examined harm and hazard of tobacco on health and there too only those which attempted to relate and quantify the tobacco risk by type of disease. Further filtering was done to select those studies which used multivariate logistic analysis of nested (multidimensional contingency tables) for Odds ratio in order to assess excess risk due to tobacco use over non-users independent of other co-variates.

The statistical data in terms of relative risk (RR), odds ratio (OR), hazard ratio (HR), and percentage of tobacco attributed cases and deaths were extracted from selected studies and were tabulated by PMID number of the study. Also extracted and tabulated along were details of sample size, subject type, and study setting. The full text of the articles can be accessed online by entering PMID number at http://www.ncbi.nlm.nih.gov/pubmed.
WHO has been guiding studies and surveys to determine the prevalence, social and economic determinants and the health impact of all known types of tobacco use in countries of the WHO South-East Asia Region.

Scientific evidence that tobacco use in any form has adverse effects on health has been the basis on which WHO’s Framework Convention on Tobacco Control (FCTC) and Tobacco Free Initiative came into existence. FCTC monitors and controls tobacco use in addition to seeking more evidence for establishing that tobacco is a major risk factor for chronic diseases and premature deaths.

The focused studies (although small and sparse) done and published by academicians, clinicians, epidemiologists and health scientists over the years in the Region are a critical component for future comprehensive research for advancing tobacco control.

This publication presents abstracts of about 1000 studies conducted in the Region on various aspect of tobacco – socio-demographic dimensions of tobacco use, access and availability of tobacco products, surveillance and monitoring, illicit trade of tobacco products, impact of tobacco advertisements, techniques of tobacco industry interference, tobacco control intervention and their impact, and taxation and other tobacco control measures adopted by countries in the Region.

Notable among these are the studies on smoking attributable morbidity and mortality from Bangladesh, India, Indonesia, Nepal, Sri Lanka and Thailand; and diseases and deaths caused by use of smokeless tobacco use in Bangladesh and India.

We hope that this collection of studies will be useful in understanding the challenges in tobacco control, lessons learnt from the interventions made between 2003 and 2014 and the need for initiating research to guide and intensify tobacco control strategies.

Dr Poonam Khetrapal Singh
Regional Director
Introduction

Part of this report is a compilation of abstracts of published research studies done from 2003 to 2014 on tobacco in countries of the World Health Organization South-East Asia Region (WHO/SEARO). Although most of the abstracts were originally prepared by the authors, we provide Pub Med ID of each study to access its full text as well. The purpose of creating this comprehensive database is to form a pool of information at one place for researchers to look at what has already been studied and what issues and research studies to take up next, and for use by public health policy advocates who may be looking for information on tobacco use pattern, impact or control in the South-East Asia Region. Studies are organized by subject matter such as tobacco use surveillance (surveys and reports); tobacco-related mortality and morbidity information including cancerous and non cancerous diseases; tobacco control interventions including policy measures, legislations and taxation; reports on tobacco promotion, advertising and sponsorship; economics of tobacco including studies on the interference of the tobacco industry. Pubmed, Medline, Taylor and Francis, Sage, JSTOR, OUP, Springer, PROQUEST and Science Direct databases have been used. In addition to research studies, some editorials, letters and news articles containing interesting ideas and useful information were also included. Some articles are listed more than once, if they fall into more than one of the categories/subcategories or regions.

Keywords: The keywords used for searches were: smoking or tobacco, gutkha, pan masala, betel quid, areca nut, beedi workers AND name of each country or South-East Asia, cessation, advertisements, health impacts of AND tobacco or smoking, tobacco control policies and measures, second-hand smoke, tobacco use surveys and reports; tobacco industry interference, tobacco-related tax, name of tobacco-related diseases AND cancer, workers AND tobacco industry AND the names of each country (Bangladesh, Bhutan, India, Indonesia, Democratic People’s Republic of Korea, Maldives, Myanmar, Nepal, Sri Lanka, Thailand, Timor-Leste) or South-East Asia.

The five broad categories of the report are:

1. Tobacco use surveillance (surveys and reports)

This section includes abstracts of tobacco use surveys that have been conducted in different areas of the WHO South-East Asian countries to gather data on the use of tobacco by population, awareness of health effects of tobacco and attitudes towards tobacco use and efforts to discourage its use. Other articles summarized here are condensed reports/ or information on tobacco use patterns or events that changed tobacco use in an area. This section is divided into subsections, by type of population reported on. Information on or related to some of the important Global Tobacco Surveillance Surveys (GYTS, GATS, GHPSS and GSPS) and International Tobacco Control (ITC) Policy Evaluation Project’s cohort studies in Member States have also been included.

The International Tobacco Control Policy Evaluation Project (the ITC Project) is the first-ever international cohort study of tobacco use being conducted in 20 countries. It is designed to evaluate the impact of policies implemented under the World Health Organization (WHO) Framework Convention on Tobacco Control (FCTC). Each ITC Survey follows standardized protocols and includes rigorous measures to assess the impact and identify the determinants of effective tobacco control policies in the following areas:

• Health warning labels and package descriptors
• Smoke-free legislation
• Pricing and taxation of tobacco products
• Education and support for cessation
• Tobacco advertising and promotions

The ITC Survey findings provide an evidence base to guide policies enacted under the FCTC, and to systematically evaluate the effectiveness of these legislative efforts.

1.1. Youth in general

Abstracts of articles listed in this section cover tobacco use in youth in the South-East Asia Region, pointing out similarities among youth of the different countries in the region and particularities of tobacco use by youth in each different region and the reasons why youth in different countries use tobacco and in the forms it takes. It also includes the GYTS and GATS surveys.
1.1.1. **Global Youth Tobacco Survey (GYTS)**

The Global Youth Tobacco Survey is a school-based survey designed to enhance the capacity of countries to monitor tobacco use among youth and to guide the implementation and evaluation of tobacco prevention and control programmes. The GYTS uses a standard methodology for constructing the sampling frame, selecting schools and classes, preparing questionnaires, following consistent field procedures, using consistent data management procedures for data processing and analysis. The information generated from the GYTS can be used to stimulate the development of tobacco control programmes and can serve as a means to assess progress in meeting programme goals. In addition, GYTS data can be used to monitor seven Articles in the WHO FCTC. The GYTS data (2007 and 2009) from 10 Member States of the WHO South-East Asia Region are covered under the GYTS sub category. Fact sheets and reports are available for member countries at: [http://www.searo.who.int/tobacco/data/en/](http://www.searo.who.int/tobacco/data/en/)

1.1.2. **Global Adult Tobacco Surveys (GATS)**

The Global Adult Tobacco Survey (GATS) is a nationally representative household survey that was launched in February 2007 as a new component of the ongoing Global Tobacco Surveillance System (GTSS). GATS enables countries to collect data on adult tobacco use and key tobacco control measures. Results from GATS assist countries in the formulation, tracking and implementation of effective tobacco control interventions, and countries are able to compare results of their survey with results from other countries.

GATS data from four Member States (Bangladesh, India, Indonesia and Thailand) of the WHO South-East Asia Region are covered under GATS. Fact sheets and reports are available for Member States at: [http://www.searo.who.int/tobacco/data/en/](http://www.searo.who.int/tobacco/data/en/)

1.2. **Children (including school-going children)**

1.3. **Health professionals (including medical and dental students)**

1.3.1. **Global Health Professions Student Survey (GHPSS)**

The World Health Organization, CDC, and the Canadian Public Health Association developed the GHPSS to collect data on tobacco use and cessation counseling among health professional students in all WHO Member States. GHPSS is a standardized school-based survey of third-year students pursuing advanced degrees in dentistry, medicine, nursing, or pharmacy. It is conducted in schools during regular class sessions. GHPSS follows an anonymous, self-administered format for data collection. GHPSS uses a core questionnaire on demographics, prevalence of cigarette smoking and other tobacco use, knowledge and attitudes about tobacco use, exposure to secondhand smoke, desire for smoking cessation, and training received regarding patient counseling on smoking cessation techniques. Questionnaires are translated into local languages as needed. GHPSS has a standardized methodology for selecting participating schools and classes and uniform data-processing procedures.

The WHO FCTC Indicators: GHPSS 2005-2009 (Medical) document contains Global Health Professions Student Survey data (of medical students) from seven Member States of the WHO South-East Asia Region. It is not only a convenient format to disseminate data widely but is also a source of valuable data for researchers, programme managers, advocates and any interested organizations or individuals. It will provide them the necessary data to carry out further analyses and bring about policy changes and appropriate public health interventions.

1.4. **Educational personnel and other professional groups**

1.4.1 **Global School Personnel Survey (GSPS)**

The GSPS is a survey of teachers and administrators working in schools selected to participate in the GYTS. It uses self-administered, anonymous data-collection procedures. Names of schools or personnel are not collected, and participation is voluntary. Surveys are completed at schools, generally at staff meetings or after school.
Introduction

The WHO FCTC Indicators: GSPS document presents data from school personnel employed in schools. Ten Member States of the WHO South-East Asia Region participated in the survey and provided data from 2006 to 2009. This has sub-sections such as: rural communities; urban communities; women; elderly; and general population.

2. Tobacco-related morbidity and mortality

This section is a wide review of mortality and morbidity associated with tobacco use. Reports describe the effects on overall mortality and/or morbidity of tobacco use in countries of the SEA Region and relative risks of the various forms of tobacco use. Abstracts of studies on toxicity of tobacco products and those investigating cancer are also included with a focus on both cancerous and non cancerous diseases due to tobacco.

2.1. Cancers and other diseases related to tobacco use

This section includes abstracts on all-cause mortality, tobacco-related specific mortality and morbidity.

3. Tobacco control interventions (including policies, legislations and taxation)

This section includes abstracts on interventions to modify tobacco use behaviour, even change in behaviour, and overall impact on health after tobacco-related health education. Strategies proposed or used in an intervention are also covered in this section. Besides this, abstracts on or related to existing policies, legislations and litigations including taxation for tobacco control are also incorporated.

4. Tobacco promotion-advertising and sponsorship

Promotion of tobacco products through advertisements and sponsorship of programs by tobacco companies are covered in this section.

5. Tobacco economics including interference of the tobacco industry

This section covers the economic gains and loss to the different countries in the Region including loss in health expenditure due to tobacco production. Tobacco employment, tobacco growing and technology, health hazards and costs faced by tobacco workers and alternate uses of tobacco are also included in this section. Transnational companies’ efforts to expand their operations in Asia as well as internal issues in multinationals have also been incorporated.
Country Studies
An annotated bibliography of scientific studies done on tobacco topic in WHO South-East Asia Region countries

BANGLADESH

1. Tobacco use surveillance (surveys and reports)

1.1. Youth in General


Abstract

BACKGROUND: Although smokeless tobacco (SLT) use is prevalent in South Asian countries including Bangladesh, information about the pattern and correlates of SLT use is scarce. This study described the pattern and predictors of SLT use among Bangladeshi adults.

METHODS: The data for this study were derived from the International Tobacco Control Policy Evaluation Bangladesh (ITC BD) Survey, a prospective cohort survey of a nationally representative sample of smokers and non-smokers, conducted during November 2011 and May 2012. The study included 5522 adults aged 15 or above. We used multiple logistic regression models to identify predictors of SLT use.

RESULTS: Of the respondents (N=5522), 20% were SLT users. In general, SLT use was significantly higher among women, the illiterate and residents of the Dhaka slums or non-tribal/non-border areas outside Dhaka; SLT use increased with age. Several attitudinal factors were also associated with SLT use. Multivariable logistic regression analyses revealed several predictors of SLT use: being female (OR=1.96, 95% confidence interval, CI: 1.18-3.24), an increasing age, being a resident of a Dhaka slum (OR=5.86; 95% CI: 3.73-9.21) or non-tribal/non-border areas outside Dhaka (OR=3.42; 95% CI: 1.94-6.03), being illiterate (OR=3.37; 95% CI: 1.99-5.71), holding positive opinion towards societal approval of SLT use (OR=5.84; 95% CI: 3.38-10.09), holding positive opinion towards SLT use by women (OR=2.63; 95% CI: 1.53-4.54), believing that SLT is addictive (OR=2.96; 95% CI: 1.51-5.81), and believing SLT is less harmful than bidi (OR=2.22; 95% CI: 1.36-3.62).

CONCLUSION: The findings suggest that coordinated efforts of governmental and non-governmental organizations, targeting both smoked tobacco and SLT use reduction and cessation, could be modified to reach each level of population including those who are marginalized, female, less educated and elderly. As most tobacco control programs in Bangladesh target mainly cigarette or bidi smoking, coordinated programs are needed that will also include SLT use within the tobacco control policy and prevention strategies.

PMID: 25007266 [PubMed - in process] PMCID: PMC4090160


Summary

ITC Bangladesh Survey Wave 2 Survey (March to June 2010) consisted of 2,311 adult smokers including 2,191 Wave 1 recontact smokers (93% retention from Wave 1) and 120 replenishment smokers and 1,940 adult non-smokers (including 1,822 recontact non-smokers (91% retention from Wave 1) and 118 replenishment non-smokers).

ITC Bangladesh Survey Wave 1 Survey (February to May 2009) is a face to face survey where a nationally representative cohort sample of 2,367 adult smokers (including cigarettes and bidis) and 2,008 adult non-smokers aged 15 and above participated. 

World Health Organization, Regional Office for South-East Asia. Regional Fact Sheet on Tobacco and Youth, 2009. New Delhi: WHO SEARO; 2009

1.1.1. Global Youth Tobacco Surveys (GYTS)


Abstract

BACKGROUND: At least two rounds of the Global Youth Tobacco Survey (GYTS) have been completed in most of the countries in the World Health Organization South-East Asia region. Comparing findings from these two rounds provides trend data on smokeless tobacco (SLT) use for the first time.

METHODS: This study uses GYTS data from Bangladesh, Bhutan, India, Indonesia, Maldives, Myanmar, Nepal, Sri Lanka, Thailand, and Timor-Leste during 2006-2013. GYTS is a nationally representative survey of 13-15-year-old students using a consistent and standard protocol. Current SLT use is defined as using any kind of SLT products, such as chewing betel quid or non betel quid or snuffing any other products orally or through the nasal route, during the 30 days preceding the survey. Prevalence and 95% confidence intervals were computed using SAS/SUDAAN software.

RESULTS: According to most recent GYTS data available in each country, the prevalence of current use of SLT among youth varied from 5.7% in Thailand to 23.2% in Bhutan; among boys, from 7.1% in Bangladesh to 27.2% in Bhutan; and among girls, from 3.7% in Bangladesh to 19.8% in Bhutan. Prevalence of SLT was reported significantly higher among boys than girls in Bhutan (boys 27.2%; girls 19.8%), India (boys 11.1%; girls 6.0%), Maldives (boys 9.2%; girls 2.9%), Myanmar (boys 15.2%; girls 4.0%), and Sri Lanka (boys 13.0%; girls 4.1%). Prevalence of current SLT use increased in Bhutan from 9.4% in 2009 to 23.2% in 2013, and in Nepal from 6.1% in 2007 to 16.2% in 2011.

CONCLUSION: The findings call for countries to implement corrective measures through strengthened policy and enforcement.

PMID: 25526249 [PubMed - in process]


Abstract

BACKGROUND: Cigarette smoking habit usually begins in adolescence. The developing countries in South Asia like Pakistan, India, Bangladesh, and Nepal, where the largest segment of the population is comprised of adolescents, are more susceptible to smoking epidemic and its consequences. Therefore, it is important to identify the association between anti-smoking initiatives and current smoking status in order to design effective interventions to curtail the smoking epidemic in this region.

METHODS: This is a secondary analysis of national data from the Global Youth Tobacco Survey (GYTS) conducted in Pakistan (year 2003), India (year 2006), Bangladesh (year 2007), and Nepal (year 2007). GYTS is a school-based survey of students targeting adolescents of age 13–15 years. We examined the association of different ways of delivering anti-smoking messages with students’ current smoking status.

RESULTS: A total of 19,643 schoolchildren were included in this study. The prevalence of current smoking was 5.4% with male predominance. No exposure to school teachings, family discussions regarding smoking hazards,
and anti-smoking media messages was significantly associated with current smoking among male students. Participants who were deprived of family discussion regarding smoking hazards (girls: odds ratio (OR) 1.56, 95% confidence interval (CI) 0.84–2.89, p value 0.152; boys: OR 1.37, 95% CI 1.04–1.80, p value 0.025), those who had not seen media messages (girls: OR 2.89, 95% CI 1.58–5.28, p value <0.001; boys: OR 1.32, 95% CI 0.91–1.88, p value 0.134), and those who were not taught the harmful effects of smoking at school (girls: OR 2.00, 95% CI 0.95–4.21, p value 0.066; boys: OR 1.89, 95% CI 1.44–2.48, p value <0.001) had higher odds of being current smokers after multivariate adjustment.

CONCLUSION: School-going adolescents in South Asia (Pakistan, India, Nepal, and Bangladesh) who were not exposed to anti-tobacco media messages or were not taught about the harmful effects in school or at home had higher odds of being current smokers than their counterparts.

PMCID: PMC3938898


Abstract

BACKGROUND: Hardcore smoking is represented by a subset of daily smokers with high nicotine dependence, inability to quit and unwillingness to quit. Estimating the related burden could help us in identifying a high risk population prone to tobacco induced diseases and improve cessation planning for them. This study assessed the prevalence and associated factors of hardcore smoking in three South-East Asian countries and discussed its implication for smoking cessation intervention in this region.

MATERIALS AND METHODS: Global Adult Tobacco Survey (GATS) data of India, Bangladesh and Thailand were analyzed to quantify the hardcore smoking prevalence in the region. On the basis of review, an operational definition of hardcore smoking was adopted that includes (1) current daily smoker, (2) no quit attempt in the past 12 months of survey or last quit attempt of less than 24 hours duration, (3) no intention to quit in next 12 months or not interested in quitting, (4) time to first smoke within 30 minutes of waking up, and (5) knowledge of smoking hazards. Logistic regression analysis was carried out using hardcore smoking status as response variable and gender, type of residence, occupation, education, wealth index and age-group as possible predictors.

RESULTS: There were 31.3 million hardcore smokers in the three Asian countries. The adult prevalence of hardcore smoking in these countries ranges between 3.1% in India to 6% in Thailand. These hardcore smokers constitute 18.3–29.7% of daily smokers. The logistic regression model indicated that age, gender, occupation and wealth index are the major predictors of hardcore smoking with varied influence across countries.

CONCLUSIONS: Presence of a higher number of hardcore smoking populations in Asia is a major public health challenge for tobacco control and cancer prevention. There is need of intensive cessation interventions with due consideration of contextual predictors.

PMID: 23621209 [PubMed - indexed for MEDLINE]

An annotated bibliography of scientific studies done on tobacco topic in WHO South-East Asia Region countries

Abstract

BACKGROUND: This paper examines the prevalence of current tobacco use among youth and adults in selected member countries of the South-East Asia Region using the data from school and household-based surveys included in the Global Tobacco Surveillance System.

MATERIALS AND METHODS: Global Youth Tobacco Survey (GYTS) data (years 2007-2009) were used to examine current tobacco use prevalence among youth, whereas Global Adult Tobacco Survey (GATS) data (years 2009-2010) were used to examine the prevalence among adults. GYTS is a school-based survey of students aged 13-15, using a two-stage cluster sample design, and GATS is a household survey of adults age 15 and above using a multi-stage stratified cluster design. Both surveys used a standard protocol for the questionnaire, data collection and analysis.

RESULTS: Prevalence of current tobacco use among students aged 13-15 varied from 5.9% in Bangladesh to 56.5% in Timor-Leste, and the prevalence among adults aged 15 and above was highest in Bangladesh (43.3%), followed by India (34.6%) and Thailand (27.2%). Reported prevalence was significantly higher among males than females for adults and youth in all countries except Bangladesh, Sri Lanka and Timor-Leste. Current use of tobacco other than manufactured cigarettes was notably higher than current cigarette smoking among youth aged 13-15 years in most countries of the Region, while the same was observed among adults in Bangladesh, India and Thailand, with most women in those countries, and 49% of men in India, using smokeless tobacco.

CONCLUSION: Tobacco use among youth and adults in member countries of the region is high and the pattern of tobacco consumption is complex. Tobacco products other than cigarettes are commonly used by youth and adults, as those products are relatively cheaper than cigarettes and affordable for almost all segments of the population. As a result, use of locally produced smoked and smokeless tobacco products is high in the region. Generating reliable data on tobacco use and key tobacco control measures at regular intervals is essential to better understand and respond with effective tobacco control intervention.

PMID: 22089684 [PubMed - indexed for MEDLINE]

1.2. Children (including school going children)


Abstract

Adolescent tobacco use (ATU) is on the rise worldwide and the problem is particularly severe in developing countries. Based on nationally representative data, this study aims to investigate the association between ATU and its possible correlates for Bangladesh, where the prevalence rate of ATU is high. The data set is extracted from the Global Youth Tobacco Survey for Bangladesh conducted in 2007. The survey collected information from a total of 3113 students from 52 schools, with a response rate of 100% at the school level, while a response rate of 88.9% was achieved from the students. Students covered in the survey were in grades 7, 8, 9, and 10, with age ranging from 11 to 17 years. The prevalence rate of ATU at the time of the survey was 8.4%, while 35.6% of the students had used at least a type of tobacco products before. Logistic regressions were used to obtain the odds ratios (ORs) in favor of ATU for each of the possible determinants and the confidence intervals (CIs) of these ratios. Use of tobacco among friends (OR = 3.46; CI = 2.37-5.05), the experience of seeing others smoking at home (OR = 2.10; CI = 1.36-3.22) or other places (OR = 1.6; CI = 1.02-2.57), receiving pocket money (OR = 7.6; CI = 4.59-13.28), receiving free tobacco from vendors (OR = 2.3; CI = 1.44-3.78), and exposure to advertisements and promotions of tobacco products (OR = 1.83; CI = 1.23-2.79) were associated with a higher likelihood of ATU. Increased awareness of health hazards of tobacco use through education in schools helped
mitigate the problem of ATU. The findings of this study have ramifications for tobacco control prevention strategies in Bangladesh.

PMID: 23359868 [PubMed - as supplied by publisher]


Abstract

OBJECTIVES: In Bangladesh, second-hand smoke (SHS) is recognized as a principal source of indoor air pollution and a major public health problem. However, we know little about the extent to which people are aware of the risks of second-hand smoking, or restrict smoking indoors or in the presence of children. We report findings of a community survey exploring these questions.

DESIGN AND SETTING: A total of 722 households were surveyed in urban and rural settings, using a multistage cluster random sampling approach and a semi structured questionnaire. In addition, we used qualitative methods to further explore the determinants of smoking-related behaviors inside homes.

FINDINGS: 55% of households in our sample had at least one regular smoker. Smoking indoors was common. In 30% of households, smoking occurred in the presence of children, exposing nearly 40% of children to SHS. Overall, we found a lack of awareness about the harms associated with second-hand smoking.

CONCLUSIONS: Our study highlights that a sizeable proportion of children and non-smokers are exposed to SHS at homes in Bangladesh, posing a significant and grave public health problem. In the absence of any impetus to legislate against smoking in private places, an educational approach is recommended to change smoking practices at home. Such a shift toward voluntary smoking restrictions at home would require behavior change among smokers and support from non-smoking family members.

PMID: 24227868 [PubMed] PMCID: PMC3831095


Abstract

Despite established country's tobacco control law, cigarette smoking by the young people and the magnitude of nicotine dependence among the students is alarming in Bangladesh. This study was aimed to determine the prevalence of smoking and factors influencing it among the secondary school students. A two-stage cluster sampling was used for selection of schools with probability proportional to enrollment size followed by stratified random sampling of government and private schools. The 70-item questionnaire included 'core GYTS' (Global Youth Tobacco Survey) and other additional questions were used to collect relevant information. Analysis showed that the prevalence of smoking was 12.3% among boys and 4.5% among girls, respectively. The mean age at initiation of smoking was 10.8 years with standard deviation of 2.7 years. Logistic regression analysis revealed that boys are 2.282 times likely to smoked than girls and it was 1.786 times higher among the students aged 16 years and above than their younger counterparts. Smoking by teachers appeared to be the strong predictor for students smoking behavior (OR 2.206, 95% CI: 1.576, 3.088) followed by peer influence (OR 1.988, 95% CI: 1.178, 3.356). Effective smoking prevention program should to be taken to reduce smoking behavior. The school curricula had less impact in preventing smoking except teacher's smoking behavior.

PMID: 213595000 [PubMed - indexed for MEDLINE]

Abstract

This study assessed the pattern of exposure to tobacco smoke pollution (TSP; also known as, secondhand smoke) in Bangladeshi households with children and examined the variations in household smoking restrictions and perception of risk for children's exposure to TSP by socioeconomic status. We interviewed 1,947 respondents from Bangladeshi households with children from the first wave (2009) of the International Tobacco Control (ITC) Bangladesh Survey. 43.5% of the respondents had complete smoking restrictions at home and 39.7% were very or extremely concerned about TSP risk to children's health. Participants with lower level of education were significantly less likely to be concerned about the risk of TSP exposure to children's health and less likely to adopt complete smoking restrictions at home. Logistic regression revealed that the predictors of concern for TSP exposure risk were educational attainment of 1 to 8 years (OR = 1.94) or 9 years or more (OR = 4.07) and being a smoker (OR = 0.24). The predictors of having complete household smoking restrictions were: urban residence (OR = 1.64), attaining education of 9 years or more (OR = 1.94), being a smoker (OR = 0.40) and being concerned about TSP exposure risk to children (OR = 3.25). The findings show that a high proportion of adults with children at home smoke tobacco at home and their perceptions of risk about TSP exposure to children's health were low. These behaviors were more prevalent among rural smokers who were illiterate. There is a need for targeted intervention, customized for low educated public, on TSP risk to children's health and tobacco control policy with specific focus on smoke-free home.

PMID: 21556182 [PubMed - indexed for MEDLINE] PMCID: PMC3083673


Abstract

OBJECTIVES: We investigated the relation between parental tobacco use and malnutrition in children <5 y of age and compared expenditures on foods in households with and without tobacco use.

METHODS: Tobacco use, child anthropometry, and other factors were examined in a stratified, multistage cluster sample of 77 678 households from the Bangladesh Nutrition Surveillance Project (2005 -2006). Main outcome measurements were stunting, underweight, and wasting, and severe stunting, severe underweight, and severe wasting. Secondary outcomes included the proportion of household expenditures spent on food.

RESULTS: The prevalence of parental tobacco use was 69.9%. Using the new World Health Organization child growth standards, prevalences of stunting, underweight, and wasting were 46.0%, 37.6%, and 12.3%, respectively. After adjusting for potential confounders, parental tobacco use was associated with an increased risk of stunting (odds ratio [OR] 1.17, 95% confidence interval [CI] 1.12-1.21, P < 0.0001), underweight (OR 1.17, 95% CI 1.12-1.22, P < 0.0001), and wasting (OR 1.10, 95% CI 1.03-1.17, P = 0.004), and severe stunting (OR 1.16, 95% CI 1.10-1.23, P < 0.0001), severe underweight (OR 1.21, 95% CI 1.13-1.30, P < 0.0001), and severe wasting (OR 1.14, 95% CI 0.98-1.32, P = 0.09). Households with tobacco use spent proportionately less per capita on food items and other necessities.

CONCLUSIONS: In Bangladesh parental tobacco use may exacerbate child malnutrition and divert household funds away from food and other necessities. Further studies with a stronger analytic approach are needed. These results suggest that tobacco control should be part of public health strategies aimed at decreasing child malnutrition in developing countries.

PMID: 17664060 [PubMed - indexed for MEDLINE]

1.3. Health Professionals (including medical and dental students)

Abstract

Tobacco use is widely entrenched in the South-East Asia (SEA) Region leading to high morbidity and mortality in this region. Several studies revealed that tobacco use is widespread among youth and school children. Exposure to second-hand smoke was reported as around 50% or more in three countries - Myanmar (59.5%), Bangladesh (51.3%), and Indonesia (49.6%). Health profession students encompassing medical, dental, nursing and pharmacy disciplines, and even qualified health professionals are no exception from tobacco use. While they are regarded as role models in tobacco cessation programs, their tobacco addiction will carry a negative impact in this endeavor. A mere inquiry about the smoking status of patients and a brief advice by doctors or dentists increases quit rates and prompts those who have not thought about quitting to consider doing so. Evidence from some randomized trials suggests that advice from motivated physicians to their smoking patients could be effective in facilitating cessation of smoking. However, the low detection rate of smokers by many physicians and the small proportion of smokers who routinely receive advice from their physicians to quit have been identified as a matter of concern. This paper describes the role and issues of involvement of health professionals in tobacco control. Data from a variety of sources is used to assess the status. Although there are some differences, tobacco use is widespread among the students and health professional students. Exposure to second hand smoke is also a matter of concern. Tobacco-related problems and tobacco control cut across a vast range of health disciplines. Building alliances among the health professional associations in a vertical way will help synergize efforts, and obtain better outcomes from use of existing resources. Health professional associations in some countries in the SEA region have already taken the initiative to form coalitions at the national level to advance the tobacco control agenda. In Thailand, a Thai Health Professional Alliance against Tobacco, with 17 allies from medical, nursing, traditional medicine, and other health professional organizations, is working in a concerted manner toward promoting tobacco control. Indian Dental Association intervention is another good example.

PMID: 23442394[PubMed - indexed for MEDLINE]


Abstract

BACKGROUND: The Medical and Dental Global Health Professions Student Surveys (GHPSS) are surveys based in schools that collect self-administered data from students on the prevalence of tobacco use, exposure to second-hand smoke, and tobacco cessation training, among the third-year medical and dental students.

MATERIALS AND METHODS: Two rounds of medical and dental GHPSS have been conducted in Bangladesh, India, Myanmar, Nepal, Sri Lanka, and Thailand, among the third-year medical and dental students, between 2005 and 2006 and 2009 and 2011.

RESULTS: The prevalence of any tobacco use among third-year male and female medical students did not change in Bangladesh, India, and Nepal between 2005 and 2006 and 2009 and 2011; however, it reduced significantly among females in Myanmar (3.3% in 2006 to 1.8% in 2009) and in Sri Lanka (2.5% in 2006 to 0.6% in 2011). The prevalence of any tobacco use among third-year male dental students did not change in Bangladesh, India, Nepal, and Thailand between 2005 and 2006 and 2009 and 2011; however, in Myanmar, the prevalence increased significantly (35.6% in 2006 to 49.5% in 2009). Among the third-year female students, a significant increase in prevalence was noticed in Bangladesh (4.0% in 2005 to 22.2% in 2009) and Thailand (0.7% in 2006 to 2.1% in 2011). It remained unchanged in the other three countries. Prevalence of exposure to second-hand smoke (SHS) both at home and in public places, among medical students, decreased significantly in Myanmar and Sri Lanka between 2006 and 2009 and in 2011. Among dental students, the prevalence of SHS exposure at home reduced significantly in Bangladesh, India, and Myanmar, and in public places in India. However, there was an increase of SHS exposure among dental students in Nepal, both at home and in public places, between 2005 and 2011. Medical students in Myanmar, Nepal, and Sri Lanka reported a declining trend in schools, with a smoking ban policy in place, between 2005 and 2006 and 2009 and 2011, while proportions of dental students reported that schools with a smoking ban policy have increased significantly in Bangladesh and Myanmar. Ever receiving cessation training increased significantly among medical students in Sri Lanka only, whereas, among dental students, it increased in India, Nepal, and Thailand.
CONCLUSION: Trends of tobacco use and exposure to SHS among medical and dental students in most countries of the South-East Asia Region had changed only relatively between the two rounds of GHPSS (2005-2006 and 2009-2011). No significant improvement was observed in the trend in schools with a policy banning smoking in school buildings and clinics. Almost all countries in the SEA Region that participated in GHPSS showed no significant change in ever having received formal training on tobacco cessation among medical and dental students.

PMID: 23442402 [PubMed - indexed for MEDLINE]


Abstract
Bangladesh's oral cancer incidence is high. Dentists can participate in tobacco control. The aim of this study is to explore tobacco use, tobacco control attitudes and oral cancer knowledge among Bangladeshi dental undergraduates. This cross-sectional study used the Global Health Professional Students Survey and the Humphris Oral Cancer Knowledge Scale. One hundred eighty six questionnaires were analysed, a 79% response rate. Tobacco use, oral cancer knowledge, attitudes towards tobacco control and the dentist's role in tobacco cessation varied significantly between colleges and by gender. Oral cancer knowledge and positive tobacco control attitudes did not influence tobacco use. There is a global problem in preparing dental students for a holistic, integrated approach to oral cancer prevention.

PMID: 20186517 [PubMed - indexed for MEDLINE]

1.3.1. Global Health Professions Student Survey (GHPSS)


1.4. Educational Personnel and other professional groups


Abstract

BACKGROUND: Despite country’s tobacco control law, cigarette smoking by the young people and the magnitude of nicotine dependence among the school personnel is alarming.

OBJECTIVE: To determine the prevalence of smoking and to examine the determinants of smoking behaviour among the secondary school teachers in Bangladesh.

METHODS: A two-stage cluster sampling was used with a selection of schools on Probability Proportional to Enrolment (PPE) size followed by stratified random sampling of government and private schools and then all the teachers present on the day of the survey were selected for the study. The 66-item questionnaire included smoking behaviour, knowledge, attitude, second-hand smoking, tobacco free school policy, cessation, media advertisement and curriculum related topics. Seven additional questions were included to assess the socio-demographic characteristics of the teachers. Data analysis was performed using SPSS 17 software. A total of 60 schools were selected with school response rate of 98.3%. An anonymous self-administered questionnaire was filled in by all teachers present at the day of the survey.

The sample consisted of 559 teachers with response rate of 99.5%.

RESULTS: The prevalence of smoking was 17% (95% CI: 14%, 20.4). About half of the teachers (48.4%) smoke daily followed by 25.3% smoke 1-2 days in last 30 days. The mean duration smoking of was 13.7(95% CI: 11.6, 15.9) years. Logistic regression analysis revealed that male teachers smoke 37.46(95% CI: 5.078, 276.432) times higher than their female counterparts. The graduate teachers were 2.179(95% CI: 1.209, 3.926) times more likely to be smoke than master's degree holder teachers. Smoking by friends appeared to be the strongest predictor for teachers smoking behaviour (OR 4.789, 95% CI: 1.757, 13.050). However, no statistically significant association was found between type of school, second-hand smoking and curriculum related factors and smoking behaviour of the teachers (p>0.05).
CONCLUSIONS: Prevalence of smoking among the teachers is high in Bangladesh. Effective smoking prevention program should take into account within the dominant of socio-environmental influence to reduce smoking behaviour. The school curriculum items had less impact in preventing smoking behaviour.

1.4.1. Global School Personnel Survey (GSPS)


1.5. Rural communities


Abstract

OBJECTIVE: To estimate the prevalence and identify correlates of smokeless tobacco consumption among married rural women with a history of at least one pregnancy in Madaripur, Bangladesh.

MATERIALS AND METHODS: We conducted a cross-sectional survey using an interviewer administered, pre-tested, semi-structured questionnaire. All women living in the study area, aged 18 years and above with at least one pregnancy in their lifetime, who were on the electoral roll and agreed to participate were included in the study. Information on socio-demographic characteristics and smokeless tobacco consumption was collected. Smokeless tobacco consumption was categorized as 'Current', 'Ever but not current' and 'Never'. Associations between smokeless tobacco consumption and the explanatory variables were estimated using simple and multiple binary logistic regression.

RESULTS: 8074 women participated (response rate 99.9%). The prevalence of 'Current consumption', 'Ever consumption but not current', and 'Never consumption' was 25%, 44% and 31%, respectively. The mean age at first use was 31.5 years. 87% of current consumers reported using either Shadapata or Hakimpuree Jarda. Current consumption was associated with age, level of education, religion, occupation, being an income earner, marital status, and age at first use of smokeless tobacco. After adjustment for demographic variables, current consumption was associated with being over 25 years of age, a lower level of education, being an income earner, being Muslim, and being divorced, separated or widowed.

CONCLUSION: The prevalence of smokeless tobacco consumption is high among rural women in Bangladesh and the age of onset is considerably older than that for smoking. Smokeless tobacco consumption is likely to be producing a considerable burden of non-communicable disease in Bangladesh. Smokeless tobacco control strategies should be implemented.

PMID: 24416234 [PubMed - indexed for MEDLINE] PMCID: PMC3885568


Abstract

BACKGROUND: Betel quid is chewed by 600 million people worldwide and it has been linked to obesity and cardiovascular disease. The purpose of our study was to examine the prevalence and predictors of betel quid chewing in a rural area of Bangladesh, and determine its effects on body mass index (BMI) and blood pressure.

METHODS: In this population-based prospective study, we analyzed data on 19,934 Bangladeshi adults. Linear and multivariate logistic regression was used to determine the socio-demographic predictors of betel quid...
chewing and the effect of betel quid on change in BMI and on systolic and diastolic blood pressure, pulse pressure, arterial pressure, overweight or obesity, and hypertension.

**RESULTS:** At baseline, betel quid was chewed by 33.2% of the cohort (35.5% of men, 31.6% of women). In a subsample in which we collected methods of use, 17.5% chewed it without tobacco and 82.5% chewed it with tobacco. In multivariate analysis, betel quid chewing was associated with female sex, older age, tobacco smoking and lower socio-economic status, as measured by fewer years of formal education and not owning land. Betel quid was chewed more times per day among women and older persons. At follow-up, persons who chewed betel quid without tobacco had higher systolic blood pressure, diastolic blood pressure and arterial pressure in comparison with never users. After controlling for other explanatory variables, chewing betel quid without tobacco was associated with general hypertension [odds ratio (OR) 1.48, 95% confidence interval (CI) 1.04-2.10] and systolic hypertension (OR 1.55, 95% CI 1.01-2.37). We did not observe associations of betel quid chewing with BMI or overweight.

**CONCLUSIONS:** Betel quid chewing is likely contributing to high blood pressure in Bangladesh, particularly among women.

PMID: 22253307 [PubMed - indexed for MEDLINE] PMCID: PMC3324453


**Abstract**

Smoking is one of the leading causes of death and two-thirds of the world’s smokers live in 10 countries, including Bangladesh. This study examines the trend and differentials in smoking in Chakaria, Bangladesh. Data from 2 surveys conducted in 1994 and 2008 in Chakaria were used.

**RESULTS:**

Results showed that smoking declined from 41% in 1994 to 27% in 2008. However, the decline was lower among the poor and the rate remained the same for the female illiterate. Interventions to prevent smoking need to be designed such that they are effective in disadvantaged groups and do not contribute to widening of socioeconomic inequalities in smoking prevalence and tobacco-related ill health and death.

PMID: 20498124 [PubMed - indexed for MEDLINE]


**Abstract**

This study examined socioeconomic differentials of tobacco consumption and its effect on illicit drug use among rural men, extracting data from the 2004 Bangladesh Demographic and Health Survey. Overall, 58.4% of the respondents consumed tobacco either by smoking or chewing. Smoking bidi (33.9%) and cigarette (23.6%) were the most prevalent forms of tobacco use. The prevalence of illicit drug use was 3.5%. The predominant illicit drug used was ganja (2.3%). Socioeconomic and behavioral factors such as age, education, religion, marital status, premarital and extramarital sexuality, and having STDs were found to be significantly (P<.001) associated with tobacco consumption. Multivariate logistic regression analyses yielded significantly (P<.001) increased risk of illicit drug use for different forms of tobacco consumption, for young age, premarital and extramarital sexuality, and non-Muslims. Appropriate measures should be undertaken to prevent smoking and illicit drug use for a healthy Bangladesh.

PMID: 20460296 [PubMed - indexed for MEDLINE]

Abstract

Bangladesh typifies many developing countries experiencing an increasing trend in tobacco consumption. However, little is known about the general pattern of tobacco consumption and about population groups who are more prone to tobacco consumption. This paper aimed at generating knowledge on tobacco consumption, especially emphasizing the identification of sociodemographic groups who are more prone to tobacco consumption vis-à-vis tobacco-related health consequences in a remote rural area in Bangladesh. Information on the tobacco consumption status of 6,618 individuals (52.1% males, 47.9% females), aged over 15 years, was collected in 1994. Both univariate and multivariate analyses were done. Individuals were categorized as consumers if they consumed tobacco in any form at all, i.e. smoke or chew. The independent variables included various characteristics of individuals and households. Overall, 43.4% of the study subjects consumed tobacco. Males were 9.38 times more likely to consume tobacco than their female counterparts. Individuals with no education were 3.62 times more likely to consume tobacco than those who had completed six or more years of schooling, and the poor were almost twice as likely to consume tobacco than the rich. Tobacco consumption in both smoke and chewing form has been a part of household consumption in Bangladesh from time immemorial. Only aggressive anti-tobacco programmes on various fronts may salvage the vulnerable groups from the menace of tobacco consumption in Bangladesh.

PMID: 18402189 [PubMed - indexed for MEDLINE] PMCID: PMC2754020

1.6. Urban communities


Abstract

BACKGROUND: Tobacco smoking (TS) and illicit drug use (IDU) are of public health concerns especially in developing countries, including Bangladesh. This paper aims to (i) identify the determinants of TS and IDU, and (ii) examine the association of TS with IDU among young slum dwellers in Bangladesh.

METHODOLOGY/PRINCIPAL FINDINGS: Data on a total of 1,576 young slum dwellers aged 15-24 years were extracted for analysis from the 2006 Urban Health Survey (UHS), which covered a nationally representative sample of 13,819 adult men aged 15-59 years from slums, non-slums and district municipalities of six administrative regions in Bangladesh. Methods used include frequency run, Chi-square test of association and multivariable logistic regression. The overall prevalence of TS in the target group was 42.3%, of which 41.4% smoked cigarettes and 3.1% smoked bidis. The regression model for TS showed that age, marital status, education, duration of living in slums, and those with sexually transmitted infections were significantly (p<0.001) associated with TS. The overall prevalence of IDU was 9.1%, dominated by those who had drug injections (3.2%), and smoked ganja (2.8%) and tari (1.6%). In the regression model for IDU, the significant (p<0.01 to p<0.10) predictors were education, duration of living in slums, and whether infected by sexually transmitted diseases. The multivariable logistic regression (controlling for other variables) revealed significantly (p<0.001) higher likelihood of IDU (OR=9.59, 95% CI=5.81-15.82) among users of any form of TS. The likelihood of IDU increased significantly (p<0.001) with increased use of cigarettes.

CONCLUSIONS/SIGNIFICANCE: Certain groups of youth are more vulnerable to TS and IDU. Therefore, tobacco and drug control efforts should target these groups to reduce the consequences of risky lifestyles through information, education and communication (IEC) programs.

PMID: 23935865 [PubMed - indexed for MEDLINE] PMCID: PMC3728353


Abstract

OBJECTIVES: To determine the extent of all forms of tobacco usage in adult Bangladeshis in relation to gender and locality.
METHODS: Three annual urban and rural cross-sectional surveys were carried out between 2001 and 2003 involving a total of 35,446 adults, of whom 54.3% were female and 51.0% were rural dwellers. Data were collected through interview using a structured questionnaire.

RESULTS: The overall prevalences of smoking, chewing tobacco and gul usage were 20.5%, 20.6% and 1.8%, respectively. Current smoking and gul usage were significantly higher in males (42.2% and 2.2%, respectively) than females (2.3% and 1.5%, respectively) while chewing tobacco was more common in females (21.6%) than males (19.4%). No significant urban-rural difference was observed in smoking rate after adjusting for sociodemographic variables, while chewing tobacco was 1.5 times more likely to occur in rural residents and gul usage was 3.6 times more likely to occur in urban residents. On average a smoker consumed 9.3 sticks a day with males and rural residents smoking more.

CONCLUSIONS: Nearly a third of the population in Bangladesh use some form of tobacco. There are marked urban-rural and male-female differences. This difference is mainly accounted for by the higher prevalence of chewing tobacco in rural areas, rural female tobacco usage is close to double than the urban rate. Smoking rates were low in Bangladeshi females, more so in urban than rural areas. The tobacco awareness programme in Bangladesh might require putting emphasis on smokeless tobacco as well as smoking.

PMID: 19679888 [PubMed - indexed for MEDLINE] PMCID: PMC2778071


Abstract

BACKGROUND: Smoking is one of the leading causes of premature death particularly in developing countries. The prevalence of smoking is high among the general male population in Bangladesh. Unfortunately smoking information including correlates of smoking in the cities especially in the urban slums is very scarce, although urbanization is rapid in Bangladesh and slums are growing quickly in its major cities. Therefore this study reported prevalences of cigarette and bidi smoking and their correlates separately by urban slums and non-slums in Bangladesh.

METHODS: We used secondary data which was collected by the 2006 Urban Health Survey. The data were representative for the urban areas in Bangladesh. Both slums and non-slums located in the six City Corporations were considered. Slums in the cities were identified by two steps, first by using the satellite images and secondly by ground truthing. At the next stage, several clusters of households were selected by using proportional sampling. Then from each of the selected clusters, about 25 households were randomly selected. Information of a total of 12,155 adult men, aged 15-59 years, was analyzed by stratifying them into slum (= 6,488) and non-slum (= 5,667) groups. Simple frequency, bivariable and multivariable logistic regression analyses were performed using SPSS.

RESULTS: Overall smoking prevalence for the total sample was 53.6% with significantly higher prevalences among men in slums (59.8%) than non-slums (46.4%). Respondents living in slums reported a significantly (P < 0.001) higher prevalence of smoking cigarettes (53.3%) as compared to those living in non-slums (44.6%). A similar pattern was found for bidis (slums = 11.4% and non-slums = 3.2%, P < 0.001). Multivariable logistic regression revealed significantly higher odds ratio (OR) of smoking cigarettes (OR = 1.12, 95% CI = 1.03-1.22), bidis (OR = 1.90, 95% CI = 1.58-2.29) and any of the two (OR = 1.23, 95% CI = 1.13-1.34) among men living in slums as compared to those living in non-slums when controlled for age, division, education, marital status, religion, birth place and types of work. Division, education and types of work were the common significant correlates for both cigarette and bidi smoking in slums and non-slums by multivariable logistic regressions. Other significant correlates of smoking cigarettes were marital status (both areas), birth place (slums), and religion (non-slums). Similarly significant factors for smoking bidis were age (both areas), marital status (slums), religion (non-slums), and birth place (both areas).

CONCLUSION: The men living in the urban slums reported higher rates of smoking cigarettes and bidis as compared to men living in the urban non-slums. Some of the significant correlates of smoking e.g. education and division should be considered for prevention activities. Our findings clearly underscore the necessity of interventions and prevention policies by policy makers, public health experts and other stakeholders in slums because smoking was more prevalent in the slum communities with detrimental health sequelae.

PMID: 19463157 [PubMed - indexed for MEDLINE] PMCID: PMC2705350
1.7. Women


Abstract

BACKGROUND AND OBJECTIVES: The population of Bangladesh is highly susceptible to secondhand smoke (SHS) exposure due to high smoking rates and low awareness about the harmful effects of SHS. This study aims to determine the prevalence of SHS exposure and highlight the essential determinants in developing successful strategies to prevent adverse health effects in Bangladesh.

METHODS: The analysis is based on the Bangladesh Demographic Health Survey 2011, in which 17,749 women in the reproductive age group (12-49 years) were included. The information regarding SHS exposure at home was derived from the question: "How often does anyone smoke inside your house?" The variable was recoded into 3 groups: daily exposure, low exposure (exposed weekly, monthly, or less than monthly), and no SHS exposure. We performed descriptive and bivariable analyses and multinomial logistic regression.

RESULTS: A total of 46.7% of the women reported high exposure to SHS at home. According to the multinomial logistic regression model, relatively lower education and lower wealth index were significantly associated with daily SHS exposure at home. The exposure differed significantly between the divisions of Bangladesh. Having children at home (vs. not) and being Islamic (compared to other religious affiliations) were protective factors.

CONCLUSIONS: The study indicates that women from socioeconomically disadvantaged households are more likely to experience daily exposure to SHS at home. Therefore, especially these groups have to be targeted to reduce tobacco consumption. In addition to aspects of legislation, future strategies need to focus educational aspects to improve the population's health status in Bangladesh.

PMID: 25125322 [PubMed - in process]


Abstract

OBJECTIVE: To estimate the prevalence and identify correlates of smokeless tobacco consumption among married rural women with a history of at least one pregnancy in Madaripur, Bangladesh.

MATERIALS AND METHODS: We conducted a cross-sectional survey using an interviewer administered, pre-tested, semi-structured questionnaire. All women living in the study area, aged 18 years and above with at least one pregnancy in their lifetime, who were on the electoral roll and agreed to participate were included in the study. Information on socio-demographic characteristics and smokeless tobacco consumption was collected. Smokeless tobacco consumption was categorized as 'Current', 'Ever but not current' and 'Never'. Associations between smokeless tobacco consumption and the explanatory variables were estimated using simple and multiple binary logistic regression.

RESULTS: 8074 women participated (response rate 99.9%). The prevalence of 'Current consumption', 'Ever consumption but not current', and 'Never consumption' was 25%, 44% and 31%, respectively. The mean age at first use was 31.5 years. 87% of current consumers reported using either Shadapata or Hakimpuree Jarda. Current consumption was associated with age, level of education, religion, occupation, being an income earner, marital status, and age at first use of smokeless tobacco. After adjustment for demographic variables, current consumption was associated with being over 25 years of age, a lower level of education, being an income earner, being Muslim, and being divorced, separated or widowed.

CONCLUSION: The prevalence of smokeless tobacco consumption is high among rural women in Bangladesh and the age of onset is considerably older than that for smoking. Smokeless tobacco consumption is likely to be producing a considerable burden of non-communicable disease in Bangladesh. Smokeless tobacco control strategies should be implemented.

PMID: 24416234 [PubMed - indexed for MEDLINE] PMCID: PMC3885568

Abstract

Tobacco use and secondhand smoke (SHS) exposure in reproductive-aged women can cause adverse reproductive health outcomes, such as pregnancy complications, fetal growth restriction, preterm delivery, stillbirths, and infant death. Data on tobacco use and SHS exposure among reproductive-aged women in low- and middle-income countries are scarce. To examine current tobacco use and SHS exposure in women aged 15-49 years, data were analyzed from the 2008-2010 Global Adult Tobacco Survey (GATS) from 14 low- and middle-income countries: Bangladesh, Brazil, China, Egypt, India, Mexico, Philippines, Poland, Russia, Thailand, Turkey, Ukraine, Uruguay, and Vietnam. The results of this analysis indicated that, among reproductive-aged women, current tobacco smoking ranged from 0.4% in Egypt to 30.8% in Russia, current smokeless tobacco use was <1% in most countries, but common in Bangladesh (20.1%) and India (14.9%), and SHS exposure at home was common in all countries, ranging from 17.8% in Mexico to 72.3% in Vietnam. High tobacco smoking prevalence in some countries suggests that strategies promoting cessation should be a priority, whereas low prevalence in other countries suggests that strategies should focus on preventing smoking initiation. Promoting cessation and preventing initiation among both men and women would help to reduce the exposure of reproductive-aged women to SHS.

PMID: 23114255[PubMed - indexed for MEDLINE]


Summary

This "Brief Profile on Gender and Tobacco in South-East Asia Region" emphasizes the need for a gender-specific approach to tobacco control. It urges Member States to take measures to address gender-specific issues when developing tobacco control strategies. It also describes the situation, challenges and opportunities related to gender and tobacco use in the Region.


Abstract

The majority of the world's 1.3 billion tobacco users are men, but female use is increasing. To examine differences in tobacco use and awareness of tobacco marketing by sex, CDC and health officials in Bangladesh, Thailand, and Uruguay (among the first countries to report results) analyzed 2009 data from a newly instituted survey, the Global Adult Tobacco Survey (GATS). This report summarizes the results of that analysis, which indicated wide variation among the three countries in tobacco use, product types used, and marketing awareness among males and females. In Bangladesh and Thailand, use of smoked tobacco products was far greater among males (44.7% and 45.6%, respectively) than females (1.5% and 3.1%, respectively). In Uruguay, the difference was smaller (30.7% versus 19.8%). Use of smokeless tobacco products in Bangladesh was approximately the same among males (26.4%) and females (27.9%), but females were significantly more likely to use smokeless tobacco in Thailand (6.3% versus 1.3%), and use in Uruguay by either sex was nearly nonexistent. Males in Bangladesh were twice as likely as females to notice cigarette advertising (68.0% versus 29.3%), but the difference between males and females was smaller in Thailand (17.4% versus 14.5%) and Uruguay (49.0% versus 40.0%). In all three countries, awareness of tobacco marketing was more prevalent among females aged 15–24 years than older women. Comprehensive bans on advertising, sponsorship, and promotion of tobacco
products, recommended by the World Health Organization (WHO), can reduce per capita cigarette consumption if enforced.

PMID: 20508591 [PubMed - indexed for MEDLINE]


Abstract

BACKGROUND: Worldwide one billion people are living in slum communities and experts projected that this number would double by 2030. Slum populations, which are increasing at an alarming rate in Bangladesh mainly due to rural-urban migration, are often neglected and characterized by poverty, poor housing, overcrowding, poor environment, and high prevalence of communicable diseases. Unfortunately, comparisons between women living in slums and those not living in slums are very limited in Bangladesh. The objectives of the study were to examine the association of living in slums (dichotomized as slum versus non-slum) with selected public health-related variables among women, first without adjusting for the influence of other factors and then in the presence of socio-economic variables.

METHODS: Secondary data was used in this study. 120 women living in slums (as cases) and 480 age-matched women living in other areas (as controls) were extracted from the Bangladesh Demographic and Health Survey 2004. Many socio-economic and demographic variables were analysed. SPSS was used to perform simple as well as multiple analyses. P-values based on t-test and Wald test were also reported to show the significance level.

RESULTS: Unadjusted results indicated that a significantly higher percent of women living in slums came from country side, had a poorer status by household characteristics, had less access to mass media, and had less education than women not living in slums. Mean BMI, knowledge of AIDS indicated by ever heard about AIDS, knowledge of avoiding AIDS by condom use, receiving adequate antenatal visits (4 or more) during the last pregnancy, and safe delivery practices assisted by skilled sources were significantly lower among women living in slums than those women living in other areas. However, all the unadjusted significant associations with the variable slum were greatly attenuated and became insignificant (expect safe delivery practices) when some socio-economic variables namely childhood place of residence, a composite variable of household characteristics, a composite variable of mass media access, and education were inserted into the multiple regression models. Taken together, childhood place of residence, the composite variable of mass media access, and education were the strongest predictors for the health related outcomes.

CONCLUSION: Reporting unadjusted findings of public health variables in women from slums versus non-slums can be misleading due to confounding factors. Our findings suggest that an association of childhood place of residence, mass media access and public health education should be considered before making any inference based on slum versus non-slum comparisons.

PMID: 18651946 [PubMed - indexed for MEDLINE] PMCID: PMC2496908

1.8. General population


Abstract

INTRODUCTION: Dual use of tobacco (using smoking and smokeless forms) in Bangladesh is uncommon in women but common in men. Dual users are at additional risk of cancers and heart diseases compared with a single form of tobacco use. Knowledge about their socioeconomic background is necessary for planning appropriate interventions. We report here socioeconomic background of the dual users of tobacco from a nationally representative survey.
METHODS: The study adopted a probability proportionate to size sampling technic of divisional population stratified into urban and rural areas to recruit men aged 25 years or older from their households. A total of 4312 men were recruited. Variables included questions on 20 household assets, tobacco use and other behavioral risk factors, and measurement of body weight and height.

RESULTS: The average age of dual users was 46.7 years old compared to 43.4 and 52.3 years for smokers and smokeless tobacco users. Prevalence of "smoking only," "smokeless only" and "dual use" of tobacco was 40.6%, 15.2%, and 14.2%, respectively. Among all tobacco users, dual users constituted 20%. These dual users had lower educational achievement, rural residence, lower intake of fruit, and higher intake of alcohol. They were more undernourished as indicated by a thin body mass index compared to nonusers and smokers. Dual users were of socioeconomically deprived as measured by wealth quartiles constructed out of household assets.

CONCLUSION: Dual use of tobacco is common in Bangladesh, and it is intimately linked with socioeconomic deprivation. Poverty reduction strategy and campaigns should address tobacco control not only tobacco in general, but its dual use in particular.

PMID: 25526248 [PubMed - in process]


Abstract

BACKGROUND: The problem of cancer, especially lung cancer, is very acute in Bangladesh. The present study was conducted to evaluate the risk of lung cancer among Bangladeshi people based on hereditary, socio-economic and demographic factors.

MATERIALS AND METHODS: This study was carried out in 208 people (patients-104, controls-104) from January 2012 to September 2013 using a structured questionnaire containing details of lung cancer risk factors including smoking, secondhand smoke, tobacco leaf intake, age, gender, family history, chronic lung diseases, radiotherapy in the chest area, diet, obesity, physical activity, alcohol consumption, occupation, education, and income. Descriptive statistics and testing of hypotheses were used for the analysis using SPSS software (version 20).

RESULTS: According to this study, lung cancer was more prevalent in males than females. Smoking was the highest risk factor (OR=9.707; RR=3.924; sensitivity=0.8872 and P<0.0001) followed by previous lung disease (asthma, tuberculosis etc.) (OR=7.095; RR=1.508; sensitivity=0.316 and P<0.0001) for male patients. Highly cooked food (OR=2.485; RR=1.126; sensitivity=0.418 and P=0.004)) and also genetic inheritance (OR=1.93; RR=1.335; sensitivity=0.163 and P=0.138) demonstrated significant correlation with lung cancer as risk factors after these two and alcohol consumption was not prevalent. On the other hand, for female patients, tobacco leaf intake represented the highest risk (OR=2.00; RR=1.429; sensitivity= 0.667 and P=0.5603) while genetic inheritance and highly cooked food also correlate with lung cancer but not so significantly. Socio- economic status and education level also play important roles in causing lung cancer. Some 78.5% male and 83.3% of female cancer patients were rural residents, while 58.2% lived at the margin or below the poverty line. Most male (39.8%) and female (50.0%) patients had completed only primary level education, and 27.6% male and 33.3% female patients were illiterate. Smoking was found to be more prevalent among the less educated persons.

CONCLUSIONS: The results obtained in this study indicate the importance of creating awareness about lung cancer risk factors among Bangladeshi people and making appropriate access to health services for the illiterate, poor, rural people.

PMID: 25227785 [PubMed - in process]
Abstract

BACKGROUND: Smoking is an increasingly prevalent habit in Bangladesh, particularly among men with low socioeconomic status.

AIM: The aim of this study was determining the prevalence and pattern of smoking among bus drivers of Dhaka city, Bangladesh.

METHODS: A cross-sectional study was carried out from 15 to 26 March 2013 among four hundred bus drivers of Dhaka city, Bangladesh aged between 18 and 50 determining the prevalence, pattern, and socioeconomic determinants of smoking. Data were input into a pre-designed access database with data management and analysis using standard statistical tools (SPSS-15) to assess significance through cross-tabulation.

RESULTS: The overall prevalence of smoking among bus drivers was 93%, and 20% of their daily income was spent on smoking. Though most (32.3%) of the drivers started smoking before involving in driving profession, but excessive smoking had been promoted by occupational and environmental stress experiencing hectic work schedule. Individuals with no education were three times (odds ratio (OR) 2.8; 95% CI 1.2-6.13) more likely to be smoker. Smoking was detected among 53.2% of smokers aged 26 or above ($\chi^2 = 8.30, P < 0.05$), and they showed significantly high prevalence. The reasons behind smoking were almost exclusively habit (38.1%), peer influence (26.8%), and thinking of stress relief (25.3%). Smoking can also worsen poverty among users and their families because most of the drivers reported chest pain (34.4%), heart disease (25.8%), and other health complications caused by smoking depriving families of much-needed income and imposing additional costs of health care.

CONCLUSION: Interventions and prevention by policy makers, public health experts, and other stakeholders should be introduced considering high prevalence of smoking among Bangladeshi bus drivers with detrimental health sequel.


Abstract

BACKGROUND: Exposure to secondhand smoke (SHS) is a serious global public health problem. Understanding the correlates of SHS exposure could guide the development of evidence based SHS exposure reduction interventions. The purpose of this study is to describe the pattern of and factors associated with SHS exposure among non-smoking adults in Bangladesh.

METHODS: Data come from adult non-smokers who participated in the second wave (2010) of the International Tobacco Control Policy (ITC) Evaluation Bangladesh Survey conducted in all six administrative divisions of Bangladesh. A structured questionnaire gathered information on participants’ demographic characteristics, pattern of SHS exposure, SHS knowledge, and attitudes towards tobacco control. Exposure to SHS at home was defined as non-smokers who lived with at least one smoker in their household and who reported having no home smoking ban. The data were analyzed using chi-square tests and logistic regression procedures.

RESULTS: The SHS exposure rate at home among the participants (N=2813) was 43%. Several sociodemographic and attitudinal factors were associated with SHS exposure. Logistic regression analyses identified eight predictors of SHS exposure: being female (OR=2.35), being aged 15-24 (OR=2.17), being recruited from Dhaka slums (OR=5.19) or non-tribal/non-border areas outside Dhaka (OR=2.19) or tribal/border area (OR=4.36), having lower education (1-8 years: OR=2.45; illiterate: OR=3.00, having higher monthly household income (5000 to <10,000 Taka: OR=2.34; 10,000 Taka or more: OR=2.28), having a father who smoked in the past or currently smokes (OR=2.09), having lower concern about the harms of tobacco on children (unconcerned OR=3.99; moderate concern OR=2.26), and not knowing the fact that SHS causes lung cancer in non-smokers (OR=2.04).
CONCLUSIONS: Almost half of non-smoking Bangladeshi adults are exposed to SHS at home. The findings suggest the need for comprehensive tobacco control measures that would improve public understanding about health hazards of SHS exposure at home and encourage educational initiatives to promote smoke-free homes. Interventions should deliver targeted messages to reach those in the low socioeconomic status group.

PMID: 25027238 [PubMed - in process] PMCID: PMC4107590


Abstract

This article aimed to identify the determinants of tobacco consumption and illegal drug use (IDU) as well as to examine the association between these two variables using a representative sample of 3,771 Bangladeshi males aged 15 to 54 years. Data were collected through Bangladesh Demographic and Health Survey 2007. To identify the determinants, the patterns of tobacco consumption and IDU were analyzed by age, education and occupation, mass media, premarital sex, wealth, and sexually transmitted infections (STIs). Prevalence of smoking cigarette and bidi was roughly 60%. However, the prevalence of IDU was 3.4%, and this proportion is statistically significant (Z = 11.32, p = .000). After bivariate analysis, almost all variables except STIs were significantly associated with tobacco consumption. Similarly, all variables except residence and mass media were associated with IDU. Based on multivariable adjusted logistic regression analysis, the likelihood of using IDU was approximately twofold (odds ratio [OR] = 1.8, 95% confidence interval [CI] = 1.23-2.53) among bidi smokers and fourfold (OR = 3.8, 95% CI = 2.62-5.56) among cigarette smokers as compared with nonsmokers.

PMID: 23065136 [PubMed - indexed for MEDLINE]


Abstract

INTRODUCTION: To examine predictors of current tobacco smoking and smokeless tobacco use among the adult population in Bangladesh.

MATERIALS AND METHODS: We used data from the 2009 Global Adult Tobacco Survey (GATS) in Bangladesh consisting of 9,629 adults aged ≥15 years. Differences in and predictors of prevalence for both smoking and smokeless tobacco use were analyzed using selected socioeconomic and demographic characteristics that included gender, age, place of residence, education, occupation, and an index of wealth.

RESULTS: The prevalence of smoking is high among males (44.7%, 95% CI: 42.5-47.0) as compared to females (1.5%, 95% CI: 1.1-2.1), whereas the prevalence of smokeless tobacco is almost similar among both males (26.4%, 95% CI: 24.2-28.6) and females (27.9%, 95% CI: 25.9-30.0). Correlates of current smoking are male gender (odds ratio [OR] = 41.46, CI = 23.8-73.4), and adults in older age (ORs range from 1.99 in 24-34 years age to 5.49 in 55-64 years age), less education (ORs range from 1.47 in less than secondary to 3.25 in no formal education), and lower socioeconomic status (ORs range from 1.56 in high wealth index to 2.48 in lowest wealth index. Predictors of smokeless tobacco use are older age (ORs range from 1.54 in 24-35 years age to 12.31 in 55-64 years age), less education (ORs range from 1.44 in less than secondary to 2.70 in no formal education), and the low (OR = 1.34, CI = 1.0-1.7) or lowest (OR = 1.43, CI = 1.1-1.9) socioeconomic status.

CONCLUSION: Implementation of tobacco control strategies needs to bring special attention on disadvantaged group and cover all types of tobacco product as outlined in the WHO Framework Convention on Tobacco Control (FCTC) and WHO MPOWER to protect people’s health and prevent premature death.

PMID: 23442403 [PubMed - indexed for MEDLINE]

**Abstract**

**OBJECTIVE:** To examine exposure to second-hand smoke (SHS) at home, in workplace, and in various public places in Bangladesh.

**MATERIALS AND METHODS:** Data from 2009 Global Adult Tobacco Survey (GATS) conducted in Bangladesh was analyzed. The data consists of 9,629 respondents from a nationally representative multi-stage probability sample of adults aged 15 years and above. Exposure to second-hand smoke was defined as respondents who reported being exposed to tobacco smoke in the following locations: Indoor workplaces, homes, government building or office, health care facilities, public transportation, schools, universities, restaurants, and cafes, coffee shops or tea houses. Exposure to tobacco smoke in these places was examined by gender across various socioeconomic and demographic sub-groups that include age, residence, education and wealth index using SPSS 17.0 for complex samples.

**RESULTS:** The study shows high prevalence of SHS exposure at home and in workplace and in public places. Exposure to SHS among adults was reported high at home (54.9%) (male-58.2% and female-51.7%), in workplace (63%) (male-67.8% and female-30.4%), and in any public place (57.8%) (male-90.4% and female-25.1%) 30 days preceding the survey. Among the public places examined exposure was low in the educational institutions (schools-4.3%) and health care facilities (5.8%); however, exposure was high in public transportation (26.3%), and restaurants (27.6%). SHS exposure levels at home, in workplace and public places were varied widely across various socioeconomic and demographic sub-groups.

**CONCLUSIONS:** Exposure was reported high in settings having partial ban as compared to settings having a complete ban. Following the WHO FCTC and MPOWER measures, strengthening smoke-free legislation may further the efforts in Bangladesh towards creating and enforcing 100% smoke-free areas and educating the public about the dangers of SHS. Combining these efforts can have a complementary effect on protecting the people from hazardous effect of SHS as well as reducing the social acceptance of smoking both at home and in public and workplaces. Ongoing surveillance in Bangladesh is necessary to measure progress towards monitoring SHS exposure.

PMID: 22089689 [PubMed - indexed for MEDLINE]


**Abstract**

This study examined knowledge, attitude, prevalence, and factors affecting cigarette smoking among male students of a university in Bangladesh. A cross-sectional survey was conducted on 474 students in 2009. Both quantitative and qualitative statistics were employed to examine the relationship between smoking and sociopsychological factors. Overall, 36.1% of the students were currently smoking. Significantly, more nonsmokers than smokers showed negative attitudes toward smoking and positive attitudes toward tobacco-controlling measures. Age, study streams and year, mother's education and occupation, monthly expenditure, and father's smoking appeared as important determinants of students' smoking. A multivariate logistic regression analysis yielded significantly (P < .001) increased risk of smoking among students of the Law and Shariah Faculty (odds ratio [OR] = 38.75, 95% confidence interval [CI] = 6.56-228.82), third-year students (OR = 7.18, 95% CI = 2.56-20.17), and urban residents (OR = 2.14, 95% CI = 1.26-3.63). There is an urgent need for health promotion and anti-tobacco education in building a tobacco-free nation.

PMID: 20460274 [PubMed - indexed for MEDLINE]

Abstract

OBJECTIVE: Rickshaw pullers in Dhaka city, Bangladesh are exposed to severe air pollution due to their long stay on city roads. In addition, smoking could further jeopardize their health status. The objective of this study is to estimate the prevalence of cigarette and bidi smoking among the rickshaw pullers in Dhaka city.

METHODS: One thousand rickshaw pullers (100 from each of the 10 blocs of Dhaka city) were randomly chosen and underwent interviewer administered questionnaire survey during August-October 2003. Data on demographics, education, rickshaw-pulling, smoking status, duration, and daily consumption were collected by 4 trained interviewers using pre-tested questionnaire. Prevalence of cigarette and bidi smoking, and their sociodemographic correlates were examined using bivariate and multivariate analyses.

RESULTS: The overall prevalence of current smoking was 75.9%, while the prevalence of cigarette, bidi and both smoking were 39.2%, 15.7% and 20.9%, respectively. Multinomial logistic regression analysis showed that those who were older, had lower mean schooling years and smoked more sticks per day are more likely to be bidi or both smokers.

CONCLUSION: The prevalence of smoking among rickshaw pullers is very high compared to that in general population. Immediate intervention programs are warranted to reduce the future burden of smoking related morbidity among them who are already exposed to tremendous pollution on city roads.

PMID:17173963[PubMed - indexed for MEDLINE]


Abstract

AIMS: This study examined the association of tobacco consumption (smoking and chewing) with illicit drug use among Bangladesh males.

DESIGN: Cross-sectional survey data from the Bangladesh Demographic and Health Survey 2004 were used.

SETTING: Bangladesh.

PARTICIPANTS: A total of 4297 males aged 15-54 years.

MEASUREMENTS: Age, education, religion, marital status, place of residence; tobacco consumption such as cigarette and bidi smoking, chewing sada, pata, tobacco leaves, gul, betel quid with zarda; taking illicit drugs such as ganja, charas, heroin, pethedine, phensidyl; having sexually transmitted diseases (STDs).

FINDINGS: Overall prevalence of tobacco consumption was 59%. Bidi smoking (29.6%), cigarette smoking (27.8%) and chewing betel quid with tobacco/zarda (17.5%) were predominant. Overall prevalence of illicit drug use was 4%. Ganja was the main drug (3%), followed by phensidyl (0.8%), heroin (0.3%) and charas (0.3%). Age, education, place of residence, marital status, having STDs, premarital and extra-marital sex were associated significantly with tobacco smoking. Almost all variables were also associated significantly with illicit drug use. Smoking cigarettes and bidi and eating tobacco leaves/shada pata/gul showed significantly positive associations with illicit drug use when adjusted for other variables.

CONCLUSIONS: Tobacco consumption is common and associated positively with the illicit drug use among males in Bangladesh.

PMID:16869847[PubMed - indexed for MEDLINE]
2. Tobacco related Mortality & Morbidity


Abstract

BACKGROUND: Tobacco smoking is a major risk factor for many diseases. We sought to quantify the burden of tobacco-smoking-related deaths in Asia, in parts of which men's smoking prevalence is among the world's highest.

METHODS AND FINDINGS: We performed pooled analyses of data from 1,049,929 participants in 21 cohorts in Asia to quantify the risks of total and cause-specific mortality associated with tobacco smoking using adjusted hazard ratios and their 95% confidence intervals. We then estimated smoking-related deaths among adults aged ≥45 y in 2004 in Bangladesh, India, mainland China, Japan, Republic of Korea, Singapore, and Taiwan—accounting for ~71% of Asia's total population. An approximately 1.44-fold (95% CI=1.37-1.51) and 1.48-fold (1.38-1.58) elevated risk of death from any cause was found in male and female ever-smokers, respectively. In 2004, active tobacco smoking accounted for approximately 15.8% (95% CI=14.3%-17.2%) and 3.3% (2.6%-4.0%) of deaths, respectively, in men and women aged ≥45 y in the seven countries/regions combined, with a total number of estimated deaths of ~1,575,500 (95% CI=1,398,000-1,744,700). Among men, approximately 11.4%, 30.5%, and 19.8% of deaths due to cardiovascular diseases, cancer, and respiratory diseases, respectively, were attributable to tobacco smoking. Corresponding proportions for East Asian women were 3.7%, 4.6%, and 1.7%, respectively. The strongest association with tobacco smoking was found for lung cancer: a 3- to 4-fold elevated risk, accounting for 60.5% and 16.7% of lung cancer deaths, respectively, in Asian men and East Asian women aged ≥45 y.

CONCLUSIONS: Tobacco smoking is associated with a substantially elevated risk of mortality, accounting for approximately 2 million deaths in adults aged ≥45 y throughout Asia in 2004. It is likely that smoking-related deaths in Asia will continue to rise over the next few decades if no effective smoking control programs are implemented. Please see later in the article for the Editors' Summary.

PMID: 24756146 [PubMed - indexed for MEDLINE] PMCID: PMC3995657


Abstract

OBJECTIVE: To directly estimate how much smoking contributes to cause-specific mortality in Bangladesh.

METHODS: A case-control study was conducted with surveillance data from Matlab, a rural sub district. Cases (n = 2213) and controls (n = 261) were men aged 25 to 69 years who had died between 2003 and 2010 from smoking-related and non-smoking-related causes, respectively. Cause-specific odds ratios (ORs) were calculated for "ever-smokers" versus "never-smokers", with adjustment for education, tobacco chewing status and age. Smoking-attributable deaths among cases, national attributable fractions and cumulative probability of surviving from 25 to 69 years of age among ever-smokers and never-smokers were also calculated.

FINDINGS: The fraction of ever-smokers was about 84% among cases and 73% among controls (OR: 1.7; 99% confidence interval, CI: 1.1-2.5). ORs were highest for cancers and lower for respiratory, vascular and other diseases. A dose-response relationship was noted between age at smoking initiation and daily number of cigarettes or bidis smoked and the risk of death. Among 25-year-old Bangladeshi men, 32% of ever-smokers will die before reaching 70 years of age, compared with 19% of never-smokers. In 2010, about 25% of all deaths observed in Bangladeshi men aged 25 to 69 years (i.e. 42,000 deaths) were attributable to smoking.

CONCLUSION: Smoking causes about 25% of all deaths in Bangladeshi men aged 25 to 69 years and an average loss of seven years of life per smoker. Without a substantial increase in smoking cessation rates, which are low among Bangladeshi men, smoking-attributable deaths in Bangladesh are likely to increase.

PMID: 24115799 [PubMed - indexed for MEDLINE] PMCID: PMC3791659

Abstract

BACKGROUND: Limited data are available on smoking-related mortality in low-income countries, where both chronic disease burden and prevalence of smoking are increasing.

METHODS: Using data on 20,033 individuals in the Health Effects of Arsenic Longitudinal Study (HEALS) in Bangladesh, we prospectively evaluated the association between tobacco smoking and all-cause, cancer, and cardiovascular disease mortality during ~7.6 years of follow-up. Cox proportional hazards models were used to estimate hazard ratios (HRs) and their 95% confidence intervals (CIs) for deaths from all-cause, cancer, CVD, ischemic heart disease (IHD), and stroke, in relation to status, duration, and intensity of cigarette/bidi and hookah smoking.

RESULTS: Among men, cigarette/bidi smoking was positively associated with all-cause (HR 1.40, 95% CI 1.06 1.86) and cancer mortality (HR 2.91, 1.24 6.80), and there was a dose-response relationship between increasing intensity of cigarette/bidi consumption and increasing mortality. An elevated risk of death from ischemic heart disease (HR 1.87, 1.08 3.24) was associated with current cigarette/bidi smoking. Among women, the corresponding HRs were 1.65 (95% CI 1.16 2.36) for all-cause mortality and 2.69 (95% CI 1.20 6.01) for ischemic heart disease mortality. Similar associations were observed for hookah smoking. There was a trend towards reduced risk for the mortality outcomes with older age at onset of cigarette/bidi smoking and increasing years since quitting cigarette/bidi smoking among men. We estimated that cigarette/bidi smoking accounted for about 25.0% of deaths in men and 7.6% in women.

CONCLUSIONS: Tobacco smoking was responsible for substantial proportion of premature deaths in the Bangladeshi population, especially among men. Stringent measures of tobacco control and cessation are needed to reduce tobacco-related deaths in Bangladesh.

PMID: 23505526 [PubMed - indexed for MEDLINE] PMCID: PMC3594295


Abstract

BACKGROUND: Tobacco use has been identified as the single biggest cause of inequality in morbidity. The objective of this study is to examine the role of social determinants on current tobacco use in thirteen low-and-middle income countries.

METHODOLOGY/PRINCIPAL FINDINGS: We used nationally representative data from the Global Adult Tobacco Survey (GATS) conducted during 2008-2010 in 13 low-and-middle income countries: Bangladesh, China, Egypt, India, Mexico, Philippines, Poland, Russian Federation, Thailand, Turkey, Ukraine, Uruguay, and Viet Nam. These surveys provided information on 209,027 respondent's aged 15 years and above and the country datasets were analyzed individually for estimating current tobacco use across various socio-demographic factors (gender, age, place of residence, education, wealth index, and knowledge on harmful effects of smoking). Multiple logistic regression analysis was used to predict the impact of these determinants on current tobacco use status. Current tobacco use was defined as current smoking or use of smokeless tobacco, either daily or occasionally. Former smokers were excluded from the analysis. Adjusted odds ratios for current tobacco use after controlling other cofactors, was significantly higher for males across all countries and for urban areas in eight of the 13 countries. For educational level, the trend was significant in Bangladesh, Egypt, India, Philippines and Thailand demonstrating decreasing prevalence of tobacco use with increasing levels of education. For wealth index, the trend of decreasing prevalence of tobacco use with increasing wealth was significant for Bangladesh, India, Philippines, Thailand, Turkey, Ukraine, Uruguay and Viet Nam. The trend of decreasing prevalence with increasing levels of knowledge on harmful effects of smoking was significant in China, India, Philippines, Poland, Russian Federation, Thailand, Ukraine and Viet Nam.
CONCLUSIONS/SIGNIFICANCE: These findings demonstrate a significant but varied role of social determinants on current tobacco use within and across countries.

PMID: 22438937 [PubMed - indexed for MEDLINE] PMCID: PMC3306395

2.1. Cancers related to tobacco use


Abstract

Bangladesh, at 142 million people, is the ninth most populous country in the world. There are 13 to 15 lakh cancer patients in Bangladesh, with about two lakh patients newly diagnosed with cancer each year. As an overview, lung cancer and mouth-oropharynx cancer rank as the top two prevalent cancers in males. Other types of cancers are esophagus cancer and stomach cancer. In women, cancer cervix uteri and breast cancer are most prevalent. Other cancer types, which affect women, are mouth and oropharynx cancer, lung cancer, and esophagus cancer. There are around 150 qualified clinical oncologists and 16 pediatric oncologists working in the different parts of the country. Regular cancer treatment is available in 19 hospitals and 465 hospital beds are attached as indoor or day care facilities for chemotherapy in the oncology/radiotherapy departments. There are about 15 linear accelerators, 12 Co-60 teletherapy and 12 brachytherapy units currently available. Approximately, 56 cancer chemotherapeutic agents are obtainable in Bangladesh. Research facilities are available at tertiary care centers and a few multi country collaborative research activities are ongoing. Bangladesh has a unique National Cancer Control Strategy and Plan of Action 2009-2015 formulated with the assistance of WHO with an objective to develop and implement continuum of cancer care through a comprehensive cancer control program. Preventive measures taken to reduce the incidence of cancer include reduced tobacco smoking, change of dietary habit and reduced food adulteration, ensuring reproductive hygiene, increased physical activity, and reduced occupational hazard. Awareness buildup and media campaign are going on by organizing the general people, opinion leaders of the society, and boy and girl scout. Training of general physicians on cancer warning signs and setup of early cancer detection centers at each medical college and district levels are ongoing. Besides these, some other major cancer programs have taken place for early detection of breast, cervical and oral cancer by Bangladesh Government and NGOs such as ICDDR,B, BRAC, Ahsania Mission Cancer Hospital, BSMMU, Bangladesh Cancer Society, Ashic Foundation, Amader Gram, AK Khan Healthcare Trust, CANSUP, Oncology club etc. Piloting of cervical cancer vaccination has recently been completed. Improving the cancer scenario overnight is not an easy task but policy makers may become interested and push this agenda forward, if the huge health impact and economic loss caused by cancer become evident to them. Besides, Bangladesh has accepted reduction of cancer morbidity and mortality targets set by United Nations and World Health Organization as a part of global non-communicable disease prevention agreement.

PMID:24455659[PubMed] PMCID:PMC3889062

2.1.1. Head and neck cancers


Abstract

The prevalence of oral cancers (OC) is high in Asian countries, especially in South and Southeast Asia. Asian distinct cultural practices such as betel-quid chewing, and varying patterns of tobacco and alcohol use are important risk factors that predispose to cancer of the oral cavity. The aim of this review is to provide an update on epidemiology of OC between 2000 and 2012. A literature search for this review was conducted on Medline for articles on OC from Asian countries. Some of the articles were also hand searched using Google. High incidence rates were reported from developing nations like India, Pakistan, Bangladesh, Taiwan and Sri Lanka. An increasing trend has been observed in Pakistan, Taiwan and Thailand, a decreasing trend is seen in Philippines and Sri Lanka. The mean age of occurrence of cancer in different parts of oral cavity is usually between 51-55 years in most countries. The tongue is the leading site among oral cancers in India. The next most common sites in Asian countries include the buccal mucosa and gingiva. The 5 year survival rate has been low for OC, despite improvements in diagnosis and treatment. Tobacco chewing, smoking and alcohol are the main reasons for the increasing incidence rates. Low socioeconomic status and diet low in nutritional value lacking vegetables and fruits contribute towards the risk. In addition, viral infections, such as HPV and poor oral hygiene, are other important risk factors. Hence, it is important to control OC by screening for early diagnosis and controlling...
tobacco and alcohol use. It is also necessary to have cancer surveillance at the national-level to collect and utilise data for cancer prevention and control programs.

PMID:24289546[PubMed - indexed for MEDLINE]


Abstract

This cross sectional study was done for the evaluation of the risk factors of oral cancer. This study was carried out in the department of Otolaryngology-Head & Neck Surgery of Bangabandhu Sheikh Mujib Medical University and Dhaka Medical College Hospital, Dhaka, Bangladesh. A total of 90 consecutive patients with oral squamous cell carcinoma (OSCC) were studied in Otolaryngology department of BSMMU and DMCH from January 2003 to December 2005. A questionnaire was used for data collection from careful history taking, clinical examination and investigations. About 71.1% were habituated with betel quid chewing, 36.7% were habituated with smoking but among 23.3 % also betel quid chewer in addition. None of the patient was found to be habituated with alcohol consumption. Majority of the patients of OSCC were malnourished, of which female were more in number, and it was found that nutritional status was significantly associated with sex. Odds ratio (OD) showed that malnutrition was positively associated with female subjects. Also it was found that 69.01% betel quid chewer was malnourished and nutritional status was significantly associated with chewing and smoking habit. Betel quid chewing, smoking and malnutrition is important risk factor of oral cancer.

PMID:21804504[PubMed - indexed for MEDLINE]

2.1.2. Thoracic cancers


Abstract

The objective of this study was to determine whether p53 codon 47 and codon 72 polymorphisms are associated with increased risk of lung cancer in Bangladeshi population. We carried out a case-control study and examined the genotype distribution Pro47Ser and Arg72Pro single-nucleotide polymorphisms along with tobacco smoking in the predisposition of lung cancer by using polymerase chain reaction-restriction fragment length polymorphism (PCR-RFLP) approach. The study included 106 lung cancer patients and 116 control subjects from Bangladesh. Lung cancer risk was estimated as odds ratio (OR) and 95 % confidence interval (CI) using conditional logistic regression models adjusting for age, sex, and smoking. No significant association was found between Pro47Ser SNP and lung cancer. The frequencies of p53 codon 72 polymorphisms (Arg/Arg, Arg/Pro, and Pro/Pro) in lung cancer were 25.5, 37.7, and 36.8 %, respectively; frequencies in the controls were 53.4, 30.2, and 16.4 %, respectively (p < 0.01). The Arg/Pro and Pro/Pro genotype were significantly associated with increased risk of lung cancer (OR = 2.51, 95 % CI = 1.38-4.82 and OR = 4.62, 95 % CI = 2.31-9.52, respectively) compared with the Arg/Arg genotype. The combined frequency of Arg/pro and Pro/Pro genotype was also found to be associated with elevated risk of lung cancer (OR = 3.36, 95 % CI = 1.90-5.94, p < 0.01). However, no significant relationship was found between age, sex, and histological subtypes of lung cancer with p53 codon 72 genotype distributions. When classified by smoking status, the effects of Arg72Pro polymorphism on lung cancer risk was only found to be significant (y (2) = 33.94, p = 0.000000004) in case of heavy smokers (40 packs per year or more). We conclude that not Pro47Ser SNP but Arg72Pro SNP is involved in susceptibility to developing lung cancer, at least in Bangladeshi population.

PMID: 25034526 [PubMed - indexed for MEDLINE]

Abstract

BACKGROUND: The problem of cancer, especially lung cancer, is very acute in Bangladesh. The present study was conducted to evaluate the risk of lung cancer among Bangladeshi people based on hereditary, socio-economic and demographic factors.

MATERIALS AND METHODS: This study was carried out in 208 people (patients-104, controls-104) from January 2012 to September 2013 using a structured questionnaire containing details of lung cancer risk factors including smoking, secondhand smoke, tobacco leaf intake, age, gender, family history, chronic lung diseases, radiotherapy in the chest area, diet, obesity, physical activity, alcohol consumption, occupation, education, and income. Descriptive statistics and testing of hypotheses were used for the analysis using SPSS software (version 20).

RESULTS: According to this study, lung cancer was more prevalent in males than females. Smoking was the highest risk factor (OR=9.707; RR=3.924; sensitivity=0.8872 and P<0.0001) followed by previous lung disease (asthma, tuberculosis etc.) (OR=7.095; RR=1.508; sensitivity=0.316 and P<0.0001) for male patients. Highly cooked food (OR=2.485; RR=1.126; sensitivity=0.418 and P=0.004)) and also genetic inheritance (OR=1.93; RR=1.335; sensitivity=0.163 and P=0.138) demonstrated significant correlation with lung cancer as risk factors after these two and alcohol consumption was not prevalent. On the other hand, for female patients, tobacco leaf intake represented the highest risk (OR=2.00; RR=1.429; sensitivity= 0.867 and P=0.5603) while genetic inheritance and highly cooked food also correlate with lung cancer but not so significantly. Socio-economic status and education level also play important roles in causing lung cancer. Some 78.5% male and 83.3% of female cancer patients were rural residents, while 58.2% lived at the margin or below the poverty line. Most male (39.8%) and female (50.0%) patients had completed only primary level education, and 27.6% male and 33.3% female patients were illiterate. Smoking was found to be more prevalent among the less educated persons.

CONCLUSIONS: The results obtained in this study indicate the importance of creating awareness about lung cancer risk factors among Bangladeshi people and making appropriate access to health services for the illiterate, poor, rural people.

PMID: 25227785 [PubMed - in process]

**Abstract**

Geographical and socio-economic factors such as climate, culture, ethnic origin, diet and life style such as smoking have been noted to influence the occurrence of bronchial carcinoma. We conducted this study to document the frequency of various histological types of bronchial carcinoma and correlated it with their demographic characteristics. This descriptive study was carried out among admitted patient with the suspicion of Bronchial carcinoma from January 2010 to January 2011 in medicine units of Mymensingh Medical College Hospital, Mymensingh. Among those only 30 consecutive histopathologically &/or cytological confirmed cases of Bronchial carcinoma were included in the study. No age, gender, environmental or occupational limits were applied for the selection of patients. Patients already diagnosed by some other hospital presenting to our unit with complications were not included in the study. Age rang were 26-70 years. Majority of patients i.e. 63.33% (n=19) were found to be in their fourth and sixth decade of life. Males were 86.66% (n=26) as compared to females 13.44% (n=4) and male to female ratio were 6.5:1. The majority of the patients were belonged to urban areas 63.34% (n=19), while 36.66% (n=11) came from the Rural population. In this study smokers were 86.66% (n= 26) and nonsmokers were 13.33% (n=4). In Occupational distribution farmers were 33.33% (n=10), service holders were 20% (n=6), businessman were 16.66% (n=5), all the female were house wife 13.33% (n=4). Specimens for histopathological study were collected by trans-thoracic needle aspiration under CT or ultrasono-guided. The results of cell types in histopathologically proven 30 Bronchial carcinoma patients were; 10(33.36%) adenocarcinoma, 7(23.33%) squamous cell carcinoma, 6(20%) small cell carcinoma, 4(13.33%) large cell carcinoma and 3(10%) non-small cell carcinoma.

**PMID:**23416802[PubMed - indexed for MEDLINE]

2.1.3. **Abdominal cancers**


**Abstract**

The effect of chronic cigarette smoking on lipid peroxidation and antioxidant status in 100 newly diagnosed patients with gastric cancer was studied. Equal number of age- and sex-matched healthy control subjects was taken as control. The level of plasma and erythrocyte thiobarbituric acid reactive substances (TBARS) was markedly increased in both the gastric cancer patients when compared to control subjects. The activities of enzymatic and non-enzymatic antioxidants were significantly decreased in both (smokers and non-smokers) gastric cancer groups when compared to control subjects. Comparatively, the increased TBARS level and decreased antioxidants level was observed in smokers than non-smoking gastric cancer patients. The present study highlights the occurrence of lipid peroxidation and possible breakdown of antioxidant status in cigarette smoking, which may subsequently increase the possibility of initiation and progression of gastric cancer.

**PMID:**19637537[PubMed - indexed for MEDLINE]

2.1.4. **Other cancers**


**Abstract**

Bangladesh, at 142 million people, is the ninth most populous country in the world. There are 13 to 15 lakh cancer patients in Bangladesh, with about two lakh patients newly diagnosed with cancer each year. As an overview, lung cancer and mouth-oropharynx cancer rank as the top two prevalent cancers in males. Other types of cancers are esophagus cancer and stomach cancer. In women, cancer cervix uteri and breast cancer are most prevalent. Other cancer types, which affect women, are mouth and oropharynx cancer, lung cancer, and esophagus cancer. There are around 150 qualified clinical oncologists and 16 pediatric oncologists working in the different parts of the country. Regular cancer treatment is available in 19 hospitals and 465 hospital beds are attached as indoor or day care facilities for chemotherapy in the oncology/radiotherapy departments. There are about 15 linear accelerators, 12 Co-60 teletherapy and 12 brachytherapy units currently available. Approximately, 56 cancer chemotherapeutic agents are obtainable in Bangladesh. Research facilities are available at tertiary
care centers and a few multi country collaborative research activities are ongoing. Bangladesh has a unique National Cancer Control Strategy and Plan of Action 2009-2015 formulated with the assistance of WHO with an objective to develop and implement continuum of cancer care through a comprehensive cancer control programme. Preventive measures taken to reduce the incidence of cancer include reduced tobacco smoking, change of dietary habit and reduced food adulteration, ensuring reproductive hygiene, increased physical activity, and reduced occupational hazard. Awareness buildup and media campaign are going on by organizing the general people, opinion leaders of the society, and boy and girl scout. Training of general physicians on cancer warning signs and setup of early cancer detection centers at each medical college and district levels are ongoing. Beside these, some other major cancer programs have taken place for early detection of breast, cervical and oral cancer by Bangladesh Government and NGOs such as ICDDR'B, BRAC, Ahsania Mission Cancer Hospital, BSMMU, Bangladesh Cancer Society, Ashic Foundation, Amader Gram, AK Khan Healthcare Trust, CANSUP, Oncology club etc. Piloting of cervical cancer vaccination has recently been completed. Improving the cancer scenario overnight is not an easy task but policy makers may become interested and push this agenda forward, if the huge health impact and economic loss caused by cancer become evident to them. Besides, Bangladesh has accepted reduction of cancer morbidity and mortality targets set by United Nations and World Health Organization as a part of global non-communicable disease prevention agreement.

PMID: 24455659 [PubMed] PMCID: PMC3889062

2.2. Non-cancerous diseases

2.2.1. Tuberculosis


Abstract

OBJECTIVE: To determine the risk factors for developing multidrug resistant tuberculosis in Bangladesh.

METHODS: This case-control study was set in central, district and sub-district level hospitals of rural and urban Bangladesh. Included were 250 multidrug resistant tuberculosis (MDR-TB) patients as cases and 750 drug susceptible tuberculosis patients as controls. We recruited cases from all three government hospitals treating MDR-TB in Bangladesh during the study period. Controls were selected randomly from those local treatment units that had referred the cases. Information was collected through face-to-face interviews and record reviews. Unadjusted and multivariable logistic regression were used to analyse the data.

RESULTS: Previous treatment history was shown to be the major contributing factor to MDR-TB in univariate analysis. After adjusting for other factors in multivariable analysis, age group "18-25" (OR 1.77, CI 1.07-2.93) and "26-45" (OR 1.72, CI 1.12-2.66), some level of education (OR 1.94, CI 1.32-2.85), service and business as occupation (OR 2.88, CI 1.29-6.44; OR 3.71, CI 1.59-8.66, respectively), smoking history (OR 1.58, CI 0.99-2.5), and type 2 diabetes (OR 2.56 CI 1.51-4.34) were associated with MDR-TB. Previous treatment was not included in the multivariable analysis as it was correlated with multiple predictors.

CONCLUSION: Previous tuberculosis treatment was found to be the major risk factor for MDR-TB. This study also identified age 18 to 45 years, some education up to secondary level, service and business as occupation, past smoking status, and type 2 diabetes as comorbid illness as risk factors. National Tuberculosis programme should address these risk factors in MDR-TB control strategy. The integration of MDR-TB control activities with diabetes and tobacco control programmes is needed in Bangladesh.


2.2.2. Cardiovascular diseases

Abstract

BACKGROUND: Areca nut, more commonly known as betel nut, is the fourth most commonly used addictive substance in the world. Though recent evidence suggests it may play a role in the development of cardiovascular disease, no studies have investigated whether betel nut use is related to subclinical atherosclerosis.

METHODS: We evaluated the association between betel nut use and subclinical atherosclerosis in 1206 participants randomly sampled from the Health Effects of Arsenic Longitudinal Study (HEALS). Frequency and duration of betel nut use were assessed at baseline, and carotid IMT was measured on average 6.65 years after baseline.

RESULTS: A positive association was observed between duration and cumulative exposure (function of duration and frequency) of betel nut use and IMT, with above-median use for duration (7 or more years) and cumulative exposure (30 or more quid-years) corresponding to a 19.1 μm [95% confidence interval (CI): 5.3-32.8; P ≤ 0.01] and 16.8 μm (95% CI: 2.9-30.8; P < 0.05) higher IMT in an adjusted model, respectively. This association was more pronounced in men [32.8 μm (95% CI: 10.0-55.7) and 30.9 μm (95% CI: 7.4-54.2)]. There was a synergy between cigarette smoking and above-median betel use such that the joint exposure was associated with a 42.4 μm (95% CI: 21.6-63.2; P ≤ 0.01) difference in IMT.

CONCLUSION: Betel nut use at long duration or high cumulative exposure levels is associated with subclinical atherosclerosis as manifested through carotid IMT. This effect is especially pronounced among men and cigarette smokers.

Comment in

- Commentary: no smoke without fire—the continuing menace of the betel nut in the world’s most vulnerable populations. [Int J Epidemiol. 2014]


Abstract

To evaluate comprehensively the distribution of established risk factors of stroke among Bangladeshi patients. This is an observational study. It involved 8400 stroke patients from different hospitals in Bangladesh over a period of sixteen years. Common established risk factors of stroke e.g. age, sex, family history, hypertension, diabetes, ischemic heart disease, smoking, obesity, dyslipidaemia, alcoholism, use of oral contraceptive pill, lack of fresh fruit consumption etc. were evaluated in these patients through a preformed questionnaire and data were analyzed. Majority of the stroke events occurred after the age of forty (82.3%) and the ischemic stroke (72%) is the most common. Apart from non modifiable risk factors (advancing age, sex. Family history of stroke) hypertension was the most common modifiable risk factor found in stroke patients (57.6%) followed by smoking (44.6%), tobacco use (24.3%), OCP use in female (40% of female stroke), diabetes (23%), ischemic heart disease (17.1%), obesity (10.6%) and dyslipidaemia (5.3%). Lack of fresh fruit consumption and alcoholism were found in some of the patients. Stroke is common after the age of forty. Ischemic events are commonest type of stroke. Hypertension, smoking, tobacco use, diabetes and ischemic heart disease were five most common risk factors of stroke. Outlining the common stroke risk factors in our settings, may help the physicians and care givers in managing this disabling disease properly.

PMID:25178605[PubMed - indexed for MEDLINE]

Abstract

Two hundred consecutive patients of acute coronary syndrome aged 30-80 years (inclusive) admitted to the coronary care unit of National institute of Cardiovascular Diseases, Dhaka, were prospectively recruited as cases. Two hundred controls were prospectively selected either from individuals attending in the Shaheed Suhrawardy Medical College Hospital, admitted for elective surgery or in medicine ward for conditions that were unlikely to confound a comparative analysis. The Cases had significantly lower yearly incomes than controls, and significantly higher number of cases is occupied as sedentary worker. Smoking was an important risk factor. About 70% of cases and 45% of controls smoked previously cigarettes. Consumption of non smoke tobacco is another risk factor. The high risk of IHD in developing countries attributed to low consumption of fruit and vegetables, and in our study regular consumption of fruits (taking fruit at least 4 days a week) shows 20.5% cases and 33% of controls (OR 0.524, 95%CI 0.333-0.823) and p value was 0.005. Around 23.5% of the cases were diabetic compared with 4.5% of controls. We found 5% cases and 1.5% controls having known dyslipidemia. Although the body-mass index of cases was 24.6±3.06 Kg/M² and controls 20.5±4.37 Kg/M². The WHR was also significantly greater in cases 0.98±0.05M vs. controls 0.93±0.10 M (p<0.001). About 31% of cases and 2% of controls had past history of myocardial infarction. The most predictive independent variables were previous smoking (p=0.001), WHR (p=0.001), history of hypertension (p<0.001), and income (p=0.001). Smoking and WHR were associated with the highest risks. The variables revealed to be significantly associated with acute coronary syndrome by bivariate analyses were all entered into the model directly. Eleven variables entered into the model. Of them Age, occupation, family income (yearly), fruit consumption, known hypertension, known DM, known dyslipidemia, previous MI, previous smoking, BMI and Waist and hip ratio were found to be the independent predictors of acute coronary syndrome. The study found that smoking tobacco, diabetes mellitus, hypertension, visceral obesity and less fruit intake are the important factors of acute coronary syndrome in Bangladesh.

PMID: 23982542 [PubMed - indexed for MEDLINE]


Abstract

BACKGROUND: Most epidemiological studies exploring the association between smokeless tobacco (SLT) use and coronary heart disease (CHD) have been in Western populations, and have focused on SLT products used in those countries. Few studies come from South Asian countries. Our objective was to determine the association between SLT use and CHD among non-smoking adults in Bangladesh.

METHODS: A matched case-control study of non-smoking Bangladeshi adults aged 40-75 years was conducted in 2010. Incident cases of CHD were selected from two cardiac hospitals. Community controls, matched to CHD cases, were selected from neighbourhoods, and hospital controls were selected from outpatient departments of the same hospitals. The Rose Angina Questionnaire (RAQ) was also used to re-classify cases and controls.

RESULTS: The study enrolled 302 cases, 1,208 community controls and 302 hospital controls. Current use was higher among community controls (38%) compared to cases (33%) and hospital controls (32%). Current use of SLT was not significantly associated with an increased risk of CHD when community controls were used (adjusted OR 0.87, 95% CI 0.63-1.19), or when hospital controls were used (adjusted OR 1.00, 95% CI 0.63-1.60), or when both control groups were combined (adjusted OR 1.00, 95% CI 0.74-1.34). Risk of CHD did not increase with use of individual types except gul, frequency, duration, past use of SLT products, or using the RAQ to re-classify cases and controls. There was a significant association between gul use and CHD when both controls were combined (adjusted OR 2.93, 95% CI 1.28-6.70).

CONCLUSIONS: There was no statistically significant association between SLT use in general and CHD among non-smoking adults in Bangladesh. Further research on the association between gul use and CHD in Bangladesh along with SLT use and CHD in other parts of the subcontinent will guide public health policy and interventions that focus on SLT-related diseases.

PMID:22276217[PubMed - indexed for MEDLINE] PMCID:PMC3262837

Abstract

BACKGROUND AND PURPOSE: There are limited population-based studies to determine the risk factors for stroke in Bangladesh.

METHODS: A health and demographic surveillance system has been maintained in Matlab, Bangladesh (population 223,886, 142 villages in 2008). All adult stroke and injury deaths (2005-2008) were monitored by verbal autopsy. Risk factors for stroke deaths were calculated using a multivariable logistic regression model with adult injury deaths as controls.

RESULTS: A total of 1250 stroke deaths (51% women; mean age 72.3 years, range 20-101) occurred out of 4955 total deaths and were compared with 246 adult injury deaths (47% women, mean age 55.8 years, range 20-100). The population-attributable mortality of stroke was 25.2% based on the verbal autopsy instrument and 17.8% when accounting for the reported sensitivity and specificity of a similar verbal autopsy instrument that has been validated for stroke death. Risk of stroke death was significantly increased with hypertension (OR 7.94, 95% CI 4.44-15.54, P < 0.001), diabetes mellitus (OR 2.54, 1.21-6.22, P = 0.02), and betel consumption (OR 2.36, 1.45-3.80, P < 0.001) when adjusted for age and sex. An increased risk was not observed with heart disease (OR 1.37, 0.45-5.95, P = 0.62), cigarette smoking (OR 1.41, 0.82-2.45, P = 0.22), tobacco powder (OR 1.15, 0.30-7.64, P = 0.86), or cigar/hookah pipe smoking 0.94 (0.45-2.18, P = 0.88) when adjusted for age and sex. There were more strokes in winter (December-March) than summer (June-September) (P < 0.001).

CONCLUSIONS: There is a high modifiable burden of risk factors for adult stroke deaths in rural Bangladesh, most notably including hypertension. Betel consumption may be an under-recognized risk factor for stroke death.

PMID:22340663[PubMed - Indexed for MEDLINE]


Abstract

The present descriptive cross-sectional study was conducted in the Department of Medicine, Mymensingh Medical College Hospital, Mymensingh, Bangladesh over a period of one year during November 2009 to October 2010. The study was conducted to describe the variations in types of stroke (ischemic stroke and hemorrhagic stroke) during summer and winter. An attempt was also made to observe the frequency of common risk factors of stroke by seasons. A total of 292 patients of any age irrespective of sex fulfilling the WHO criteria of acute stroke and confirmed by CT scan were selected from consecutive admission in the Department of Medicine, Mymensingh Medical College Hospital. Detail history and thorough clinical examinations were done. Routine and relevant investigations were carried out. The mean age of the patients was 59.9±14.3 years. A male preponderance was observed in the study. In summer 66% of patients and in winter 34% of patients were presented. Ischemic stroke was present in 54.1% patients and 45.9% patients had hemorrhagic stroke. The study found that the frequency of ischaemic stroke during summer (62.4%) was significantly greater than that during winter (37.8%). The frequency of haemorrhagic stroke during winter (62.2%) was significantly greater than that during summer (37.6%). Hypertension was the most important risk factor and other risk factors were smoking, diabetes mellitus, tobacco chewing, ischemic heart disease, dyslipidemia, oral contraceptive pill, alcohol consumption, atrial fibrillation and past history of stroke. Increasing age was also noted as a risk factor (60.7% >60 years). Most of the risk factors were homogenously distributed between two seasons and between ischemic and haemorrhagic group. Hypertension was significantly higher in haemorrhagic stroke patients compared to ischemic stroke patients.

PMID:22314448[PubMed - Indexed for MEDLINE]

Abstract

This study is a prospective cross-sectional study conducted in the Neurology and Medicine department of Mymensingh Medical college Hospital (MMCH) to see the association of different components of serum lipids among ischemic and hemorrhagic stroke patients. Cases were selected following certain inclusion and exclusion criteria. Result showed that both types of stroke were more common after the age of 50 years. Male suffered more than female. M:F in ischemic stroke group was 1.73:1, and in hemorrhagic group was 1.42:1. Both types of stroke belong to middle class people. Smoking, hypertension and diabetes mellitus were equally common in both types of stroke. Low density lipoprotein (LDL) level were more than desired level in both types of stroke and there was no significant difference between two groups (p>0.05). Other components of lipid profile (total cholesterol, HDL, Triglyceride) were within normal range and there was no significant difference between two groups (p>0.05).

PMID:20395908 [PubMed - indexed for MEDLINE]


Abstract

OBJECTIVES: To determine the risk of coronary heart disease (CHD) associated with various types of tobacco consumption among young patients aged 20-49 years attending a tertiary care cardiac hospital in Bangladesh.

STUDY DESIGN: Case-control study.

METHODS: The study was undertaken at the National Institute of Cardiovascular Diseases (NICVD), Dhaka, Bangladesh. The study population comprised 69 cases with CHD and 138 controls without CHD from the emergency department of NICVD. Quantitative interviews were performed.

RESULTS: Most of the cases (79.7%) were either current or past consumers of some form of tobacco, compared with less than half of the controls (46.4%). The increased risk of CHD was approximately four fold in ever smokers [adjusted odds ratio (OR) 4.0, 95% confidence interval (CI) 1.7-9.5] and cases who had ever used smokeless tobacco (adjusted OR 4.0, 95% CI 2.0-8.1). Smokeless tobacco consumption was strongly associated with CHD after adjustment for smoking and other confounders.

CONCLUSION: This study found evidence for an association between various types of tobacco consumption and CHD, particularly for bidi smoking and different types of smokeless tobacco consumption. Policies should be made and implemented to combat bidi smoking and smokeless tobacco consumption, as well as cigarette smoking.

PMID:18657835 [PubMed - indexed for MEDLINE]


Abstract

BACKGROUND: Data regarding the impact of cigarette smoking on trace elements are scarce and inconsistent. In this study, we evaluated the effect of smoking on serum concentrations of trace elements among adult males with heart disease.
METHODS: This cross-sectional study included 100 adults hospitalized with heart disease in Bangladesh. The major variables of interest included mean serum concentrations of trace elements and proportion of subjects with bacterial growth on throat swab culture.

RESULTS: Smokers had significantly lower serum concentrations of retinol, alpha-tocopherol, selenium, and zinc and increased concentrations of copper. Throat swab cultures were more often positive for Streptococcus beta-hemolyticus in smokers than controls.

CONCLUSIONS: Smoking decreases serum concentrations of trace elements. Smoking control programs are needed in Bangladesh to improve health and nutrition of the people who are already nutritionally deficient.


Abstract

BACKGROUND: Strategies for preventing premature cardiovascular disease include measures to control its risk factors. To plan such activities, prevalence of these factors must be known. Data regarding risk factor prevalence is limited in Bangladesh and measurement of biochemical factors is not always feasible. The aim of our study is to describe the non-biochemical risk factors in a clinic-based rural population of Bangladesh that would reflect at least a part of the problem in the rural area.

METHODS: A cross sectional study was done in a clinic based patient population aged 20 years and older (471 males and 800 females) in a rural community of Bangladesh. A questionnaire on lifestyle including dietary and smoking habit was administered and physical examinations including height, weight, waist circumference, and blood pressure were measured in standardized way.

RESULTS: Mean body mass index was 18.5 kg/m² (standard deviation [SD]: 2.9 kg/m²) in males and 18.7 kg/m² (SD: 3.3 kg/m²) in females. Mean systolic blood pressure was 120.0 mmHg (SD: 18.5 mmHg) and mean diastolic blood pressure 77.2 mmHg (SD: 9.9 mmHg) in all subjects. The prevalence of hypertension (140+/90+ mmHg and/or on treatment) was 17.8%. Prevalence of tobacco consumption (smoking and chewing) was 43.8% in males and 27.1 in females. Prevalence of abdominal obesity (waist circumference >94 cm in males, >80 cm in females) was 1.6 % and 11.4 % for males and females respectively. Proportion of overweight (BMI 25.0+) was 3.6%.

CONCLUSION: Prevention programs and measures should be emphasized for the control of tobacco and hypertension in general, and central obesity in females, as far as rural population of Bangladesh is concerned.

PMID:15162980[PubMed - indexed for MEDLINE]

2.2.3. Diabetes


Abstract

BACKGROUND: Awareness regarding risk factors is a prerequisite for the prevention of diabetes in general population. However, there are great variations in the level of this awareness from population to population and this needs to be explored in different ethnic and social groups for designing appropriate preventive strategies. The purpose of the study was to assess the level of awareness regarding the risk factors responsible for the development of type 2 diabetes and its determinants among individuals who attended a tertiary care hospital.
METHODS: Under an analytical cross-sectional design, 400 non-diabetic respondents, aged >30 years, were conveniently selected from the Out-Patient Department of BIRDEM, the tertiary care hospital of the Diabetic Association of Bangladesh. A pretested, semi-structured questionnaire was developed to assess knowledge and attitude of the respondents. Respondents' level of knowledge and attitude were categorized as good, average and poor (GAP). Multivariate along with bivariate statistics was used to measure knowledge and attitude of type 2 diabetes.

RESULTS: Among the respondents the levels of knowledge and attitude were 13%, 10% good; 68%, 75% average and 19%, 14% poor respectively. In multivariate analysis, high literacy (p = 0.0001), respondents who are in service (p = 0.02) and family history of diabetes (p = 0.02) were found significantly associated with the knowledge score after adjustment. Respondents who had passed secondary and higher secondary education had a significant association (p = 0.03) with the attitude score. Housewives had a significantly lower attitude score than others (p = 0.04). Family history of diabetes and knowledge on the risk factors of diabetes showed significant positive association with the attitude score (p = 0.013 and p = 0.0001 respectively).

CONCLUSIONS: Overall, respondents participating in this study have average awareness regarding risk factors of diabetes. From a public health perspective, there is a decisive need of innovative prevention programs for targeting people including high-risk individuals.


Abstract

Non-adherence to preventive and therapeutic life-style recommendations among patients with diabetes is special challenge in the management of these patients. This study aimed to measure the proportion of non-adherence to life-style modification and factors associated with these among a group of Bangladeshi type 2 diabetic patients. Under an analytical cross-sectional design 374 type 2 diabetic patients (age >20 years), diagnosed for at least 1 year, were selected from different health care centers operated by the Diabetic Association of Bangladesh. Non-adherence rate were assessed for: Diet (88%), exercise (25%), routine blood glucose testing (32%), foot care (70%), smoking (6%) and betel quid chewing habit (25%). Binary logistic regression suggests that higher education group (P = 0.013), rural area (P = 0.013) and attendance to diabetes education classes (P = 0.043) showed good adherence to diet and non-attendance to diabetes education class (P = 0.014), older age (P = 0.037) are associated to non-adherence to exercise. Unemployed patients showed more non-adherence to blood glucose testing (P = 0.045) than others. Non-attendance to diabetes education class (P = 0.037) and business occupation group (P = 0.039) showed significant association to smoking and betel quid intake habit respectively.

PMID:24748356[PubMed - indexed for MEDLINE]


Abstract

A cross-sectional survey was conducted in Dinajpur district, the Northwest Bangladesh, in order to determine the risk factors associated with the development of diabetes from pre-diabetes condition. Among the various possible risk factors, hypertension status, level of walk, dietary and smoking behaviour were selected as significant risk factors associated with the development of diabetes from the pre-diabetes condition. Pre-diabetes subjects with hypertension were 1.54 fold more possibility of diabetes than those of no hypertension. Developing diabetes were tended 2.10 and 1.64 fold among the people practicing one or two days walking and four to five days walking per week, respectively, in compare to the subjects having regular walking habit. Taking up sweet taste diet during pre-diabetes condition was also marked as risk factor which pushed the patients toward the development of diabetes in 2.12 times higher than the people who did not take sweet taste diet during pre-diabetes condition. Smoking behaviour of the pre-diabetes patients was also identified as a significant risk factor of diabetes. The study indicated that the ex-smokers and current smokers were 1.53 times and 1.73 times, respectively, more possibility of migrating from pre-diabetes condition to diabetes one in compare to those who never took smoke. However, for checking the development of diabetes from pre-diabetes condition and establishing proper strategy as well, a deep and large scale research is highly recommended with these identified risk factors.

Abstract

BACKGROUND: The prevalence of type-2 diabetes and metabolic syndrome are increasing in the developing world; we assessed their prevalence among the urban middle class in Bangladesh.

METHODS: In this cross-sectional survey (n = 402), we randomly selected consenting adults (≥ 30 years) from a middle-income neighborhood in Dhaka. We assessed demography, lifestyle, and health status, measured physical indices and blood pressure and obtained blood samples. We evaluated two primary outcomes: (1) type-2 diabetes (fasting blood glucose ≥ 7.0 mmol/L or hemoglobin A1C ≥ 6.5% (48 mmol/mol) or diabetes medication use) and (2) insulin resistance (type-2 diabetes or metabolic syndrome using International Diabetes Federation criteria).

RESULTS: Mean age and Quetelet's (body mass) index were 49.4 ± 12.6 years and 27.0 ± 5.1 kg/m²; 83% were married, 41% had ≥12 years of education, 47% were employed, 47% had a family history of diabetes. Thirty-five percent had type-2 diabetes and 45% had metabolic syndrome. In multivariate models older age and family history of diabetes were significantly associated with type-2 diabetes. Older age, female sex, overweight or obese, high wealth index and positive family history of diabetes were significantly associated with insulin resistance. Participants with type-2 diabetes or insulin resistance had significantly poorer physical health only if they had associated cardiovascular disease.

CONCLUSIONS: The prevalence of type-2 diabetes and metabolic syndrome among the middle class in Dhaka is alarmingly high. Screening services should be implemented while researchers focus on strategies to lessen the incidence and morbidity associated with these conditions.


Abstract

Diabetes Mellitus is a leading cause of death in present world. This study was carried out to evaluate the management, control, complication profile and treatment strategies in patients with diabetes and to determine what extent management of diabetes in a tertiary-care diabetic hospital in Bangladesh adhered to current guidelines. Total 140 diabetic patients (type-1 = 3, type-2 = 137) were randomly selected from outpatient department of a tertiary care diabetic hospital in the Rajshahi city, Bangladesh, during the month of August to September. A standard questionnaire was constructed in local language and interview was administrated. The result was expressed as mean ± SD and the age was 53.2 ± 10.5 yr, duration of diabetes was 6.3 ± 5.6 yr and age at the onset of diabetes was 46.9 ± 9.9 yr. The study group comprised of about 43% male and 57% female with varying risk factors including family history (49%), smoking (11%) and both smoking and family history (4%). Results showed deteriorating glycemic control with mean FPG (fasting blood glucose) and PPG (postprandial blood glucose) level was 8.9 ± 3.6 mmol/L and 11.2 ± 4.7 mmol/L respectively. About 25% patients had FPG level < 6.1 mmol/L, 24% had FPG 6.1 - 7.8 mmol/L and rest 51% had FPG > 7.8 mmol/L. Of the 51% patients with hypertension, 94% were taking anti-hypertensive medicine and 21% patients with dyslipidemia, 59% were treated with lipid lowering agents. Micro-vascular and Macro-vascular complications were reported in 49% and 11% patients respectively. The rates of diabetic complications were cataract 19%, diabetic retinopathy 14%, neuropathy symptoms 35%, nephropathy 6%, MI 6%, cerebral stroke 4% and history of angina pectoris was 7%. Proportion of patients on diet control alone, oral hypoglycemic agent (OHA), insulin and combination of insulin & OHA was 10, 44, 25 and 21 percent respectively. Quality of life evaluation showed that about half of patients have poor quality of life as well as poor adherence to diet, exercise and self testing of blood glucose. In conclusion, majority of the patients were still not satisfactorily controlled. There is an urgent need for effective remedial measures to increase adherence to practice guidelines and to educate both patients and healthcare personnel on importance of achieving clinical targets for metabolic control.

Abstract

Diabetes mellitus is one of the most important modifiable risk factors for ischemic stroke. Cigarette smoking is a risk factor for atherosclerotic disease. There is a strong relationship between diabetes mellitus and cigarette smoking with ischemic stroke. A case control study was designed to see the association of diabetes mellitus and cigarette smoking with ischaemic stroke. The study was done from January 2009 to December 2009. Sixty subjects were selected as study population which were taken from Dhaka medical college hospital, Dhaka. Among them 30 were diagnosed case of ischemic stroke and 30 were age and sex matched control. The study showed that 33.33% patients of case group and 10 % respondents of control group had diabetes mellitus. It also revealed that 56.66% of case group and 53.33% of control group were smoker and the mean duration of smoking was 27.41 ± 2.98 years in case group and 15.63 ± 2.85 years in control group. The study suggests that diabetes mellitus is significantly associated with ischemic stroke and longer duration of smoking is also associated with ischaemic stroke.


Abstract

Diabetes Mellitus (DM) is a public health challenge all over the world. Recent evidence suggests that there is a positive association between smoking and the risk of diabetes. This descriptive cross-sectional study was conducted from March to June 2008 at BIRDEM Hospital, Shahbagh, Dhaka to find out pattern of tobacco consumption among diabetic patients. Age of the respondents was >15 years. With purposive sampling total 255 respondents were selected. Data was collected through face-to-face interview with structured questionnaire. Out of 255 respondents, 51.4% consumed defferent type of tobacco. Smoker was 63.36% and smokeless tobacco user was 52.67%. The highest (45.80%) had habit of smoking, 36.64% had habit of smokeless tobacco and 17.56% had habit both types of tobacco consumption. The highest smoking and smokeless tobacco consumption found within 50-60 years age group. Total 60.80% male had smoking habit and 32.82% female were smokeless tobacco consumer but no female was smoker. Twenty nine percent tobacco consumers were primarily educated, 16.08% service holders were tobacco consumer and 13.75% service holders were smoker. Among respondents lung diseases and heart diseases were common (78.54.0% and 49.36%). Respondents who consumed tobacco were suffered (74.36%) more complication than non-tobacco consumer (25.64%). So an effective awareness program is required to discourage the consumption of tobacco to protect diabetic patients.


Abstract

Our study was done on 111 participants of different government institutions who were involved in the highest most responsibilities in their respective jobs. Their higher educational level, job stress, type1 personality affect a lot on their health status. Therefore, it was our concern to investigate the various health risk factors and their impacts on the health status of this study group. The aim of the study was to determine the prevalence and distribution of hypertension, diabetes mellitus, obesity, physical activity level and smoking status among the subjects. This cross-sectional study was done from July 2006 to June 2007. 2.7% of the subjects were newly diagnosed as hypertensive as well as urinary sugar was present in 3.6% of the subjects. The overall prevalence of hypertension was 24.32% and diabetes was 11.71%. Subjects who adopted regular physical exercise were less likely to develop hypertension. No significant association was found between BMI and hypertension as well as diabetes mellitus. In spite of their higher educational level, 30% of the subjects were smokers. So, regular check up of health status even in a year is necessary.

PMID:19623145[PubMed - indexed for MEDLINE]

2.2.4. Respiratory

Abstract

This prospective, cross-sectional population based survey was carried out in the Respiratory wing, Department of Medicine, Bangabandhu Sheikh Mujib Medical University, Dhaka, Bangladesh to see the prevalence and risk factors of chronic obstructive pulmonary disease (COPD) among Dhaka City Population in Bangladesh. The total sample size was 900 at the age of 35 years or above. Spirometry was performed according to ATS criteria. Data related to smoking history, respiratory symptoms, co-morbidities, physical examination findings, spirometry values and other investigation reports were noted in the questionnaire. The mean age was 45.26±10.08 (Mean±SD); of them, male 76.9% and female 23.1%. Among them, smoker was 481 with a smoking duration of 10 pack year 27.8% and non smoker were 419. Spirometric screening yielded diagnosis of COPD in 11.4% (103/900). Using operational severity criteria adopted from Global Initiative for Obstructive Lung Disease (GOLD) mild, moderate, severe and very severe COPD were found in 42.7%, 27.2%, 20.4% and 9.7% respectively. The hallmark symptom of COPD exertional dyspnea was seen in 10.4%, non-specific symptoms like cough and sputum were found in 40% and 19% respectively. Physical sign like vesicular breath sound with prolonged expiration and ronchi were found in 6.1% and 4.1% respectively. In this study, age (Mean±SD in years) (57.34±11.74), Sex (Male: Female = 4:1), low BMI (Mean±SD) (21.56±3.83), Smoker 56(20.2%) and low Socio-economic condition 54(13.6%) found to be risk factor of COPD. Regression analysis revealed that age (p<0.001), sex (p<0.001), smoking duration (p<0.001) and low socioeconomic condition (p<0.05) as independent risk factors for COPD.

PMID:23982547[PubMed - indexed for MEDLINE]


Abstract

Indoor exposure to particulate matter (PM) increases the risk of acute lower respiratory tract infections, which are the leading cause of death in young children in Bangladesh. Few studies, however, have measured children's exposures to indoor PM over time. The World Health Organization recommends that daily indoor concentrations of PM less than 2.5μm in diameter (PM(2.5)) not exceed 25μg/m(3). This study aimed to describe the seasonal variation and determinants of concentrations of indoor PM(2.5) in a low-income community in urban Dhaka, Bangladesh. PM(2.5) was measured in homes monthly during May 2009 to April 2010. We calculated the time-weighted average, 90th percentile PM(2.5) concentrations and the daily hours PM(2.5) exceeded 100μg/m(3).

Linear regression models were used to estimate the associations between fuel use, ventilation, indoor smoking, and season to each metric describing indoor PM(2.5) concentrations. Time-weighted average PM(2.5) concentrations were 190μg/m(3) (95% CI 170-210). Sixteen percent of 258 households primarily used biomass fuels for cooking and PM(2.5) concentrations in these homes had average concentrations 75μg/m(3) (95% CI 56-124) greater than other homes. PM(2.5) concentrations were also associated with burning both biomass and kerosene, indoor smoking, and ventilation, and were more than twice as high during winter than during other seasons. Young children in this community are exposed to indoor PM(2.5) concentrations 7 times greater than those recommended by World Health Organization guidelines. Interventions to reduce biomass burning could result in a daily reduction of 75μg/m(3) (40%) in time-weighted average PM(2.5) concentrations.

PMID:23127494[PubMed - indexed for MEDLINE] PMCID:PMC3582809


Abstract

This study was carried out in the Respiratory wing, department of Medicine, Bangabandhu Sheikh Mujib Medical University to evaluate the efficacy of spirometric screening for the detection of chronic obstructive pulmonary disease (COPD) in Bangladeshi population. A total number of 400 participants were included in the study [60.50% male and 39.50% female, aged (M+/-SD) 48+/-7.54 years]. Free spirometry was offered to them. Among them 200 were smokers with a smoking duration of 17.07+/-7.50 pack-years and 200 non-smokers. Spirometric screening yielded diagnosis of COPD in 12.50% (50/400); of them 2.75% (11/400) was non-smoker compared to 9.75% (39/400) smoker (x2=17.92, p=0.001) as diagnosed by spirometry following Global Initiative for Chronic Obstructive Lung diseases (GOLD) criteria. Using operational severity criteria adopted from GOLD, mild obstruction was found in 36% (18/50), moderate obstruction in 50% (25/50) and severe obstruction was found in 14% (7/50) of all subjects. The hallmark symptom of COPD, exertional dyspnoea was seen in only 4.3%
An annotated bibliography of scientific studies done on tobacco topic in WHO South-East Asia Region countries

2.2.5. Other diseases


Abstract

PURPOSE: The aims of this study were first to identify the risk indicators for permanent tooth extraction in patients who were receiving free dental treatment, and second to determine whether or not the reasons for tooth extraction are related to socio-demographic factors.

MATERIALS AND METHODS: Bangladeshi adults who visited Dhaka Dental College Hospital participated in this study. For each extraction, the clinician recorded age, sex, educational status, type of tooth extracted, dietary habits, oral hygiene, history of smoking and betel quid chewing and reasons for tooth extraction. A series of bivariate analyses and logistic regression analyses were carried out to assess the effects of major variables.

RESULTS: A total of 868 teeth were extracted from 582 patients. Among them, 586 (67.5%) of the teeth were extracted due to caries and its sequelae, 161 (18.5%) and 121 (13.9%) were extracted for periodontal and other reasons. Logistic regression analysis revealed that tooth extraction due to caries had significant associations with age (P = 0.0001), tooth type (P = 0.013), consumption of sweets, snacks and soft drinks (P = 0.0001 and P = 0.0001, respectively), frequency of teeth cleaning (P = 0.007) and dental attendance pattern (P = 0.004). For tooth extraction due to periodontal disease, associations with age (P = 0.001), educational level (P = 0.018), tooth type (P = 0.024), betel quid chewing (P = 0.0001), smoking habit (P = 0.032), method of teeth cleaning (P = 0.001) and the use of dentifrices (P = 0.024) were statistically significant.

CONCLUSIONS: In this group of patients, caries and its sequelae were the most common reasons for extraction of teeth, followed by periodontal disease. Betel quid chewing, smoking and dietary and oral hygiene habits were also significant predictors of tooth loss.

PMID:19119574[PubMed - indexed for MEDLINE]


Abstract

AIM: To determine the relationship between betel quid chewing additives and established periodontitis in Bangladeshi subjects.

MATERIAL AND METHODS: A total of 864 subjects participated in this study. Among them, 140 pairs of sex- and age-matched case subjects and control subjects were selected. A case was defined as a person who had at least two sites with a clinical attachment level (CAL)> or =6 mm and at least one site with probing depth (PD)> or =5 mm. Subjects who did not fulfill these criteria were considered as controls. Information on sociodemographic variables, psychological stress, dental health behaviour, smoking and betel quid chewing habits was obtained.

RESULTS: Multiple logistic regression analysis showed that current betel quid chewers had greater probabilities of having established periodontal disease than did non-chewers (odds ratio=3.97, p<0.05). Mean PD, mean CAL, mean percentage of bleeding on probing and number of missing teeth were significantly higher in chewers of...
betel quid with tobacco and masala than in chewers of betel quid without such additives adjusting for age, sex, smoking habit, body mass index, dental visit pattern, stress and plaque index. Higher frequency and longer duration of betel quid chewing showed a significant relation to an increase in periodontal parameters.

CONCLUSION: The results indicate that betel quid additives might significantly enhance periodontitis in the population studied.

PMID:18021263[PubMed - indexed for MEDLINE]


Abstract

An established exposure-response relationship exists between water arsenic levels and skin lesions. Results of previous studies with limited historical exposure data, and laboratory animal studies suggest that diet may modify arsenic metabolism and toxicity. In this study, we evaluated the effect of diet on the risk of arsenic-related skin lesions in Pabna, Bangladesh. Six hundred cases and 600 controls loosely matched on age and sex were enrolled at Dhaka Community Hospital, Bangladesh, in 2001-2002. Diet, demographic data, and water samples were collected. Water samples were analyzed for arsenic using inductively coupled plasma mass spectroscopy. Betel nut use was associated with a greater risk of skin lesions in a multivariate model [odds ratio (OR) = 1.67; 95% confidence interval (CI), 1.18-2.36]. Modest decreases in risk of skin lesions were associated with fruit intake 1-3 times/month (OR = 0.68; 95% CI, 0.51-0.89) and canned goods at least 1 time/month (OR = 0.41; 95% CI, 0.20-0.86). Bean intake at least 1 time/day (OR = 1.89; 95% CI, 1.11-3.22) was associated with increased odds of skin lesions. Betel nut use appears to be associated with increased risk of developing skin lesions in Bangladesh. Increased intake of fruit and canned goods may be associated with reduced risk of lesions. Increased intake of beans may be associated with an increased risk of skin lesions. The results of this study do not provide clear support for a protective effect of vegetable and overall protein consumption against the development of skin lesions, but a modest benefit cannot be excluded.

PMID:16507454[PubMed - indexed for MEDLINE] PMCID:PMC1392225

3. Tobacco control interventions (including policies, legislations and taxation)


Abstract

The MPOWER policy package enables countries to implement effective, evidence-based strategies to address the threat posed to their population by tobacco. All countries have challenges to overcome when implementing tobacco control policy. Some are generic such as tobacco industry efforts to undermine and circumvent legislation; others are specific to national or local context. Various factors influence how successfully challenges are addressed, including the legal-political framework for enforcement, public and administrative attitudes towards the law, and whether policy implementation measures are undertaken. This paper examines District Tobacco Control Taskforces, a flexible policy mechanism developed in Bangladesh to support the implementation of the Smoking and Tobacco Products Usage (Control) Act 2005 and its 2013 Amendment. At the time of this study published research and/or data was not available and understanding about these structures, their role, contribution, limitations and potential, was limited. We consider Taskforce characteristics and suggest that the "package" comprises a distinctive tobacco control implementation model. Qualitative data is presented from interviews with key informants in ten districts with activated taskforces (n = 70) to provide insight from the perspectives of taskforce members and non-members. In all ten districts taskforces were seen as a crucial tool for tobacco control implementation. Where taskforces were perceived to be functioning well, current positive impacts were perceived, including reduced smoking in public places and tobacco advertising, and increased public awareness and political profile. In districts with less well established taskforces, interviewees believed in their taskforce's 'potential' to deliver similar benefits once their functioning was improved. Recommendations to
improve functioning and enhance impact were made. The distinctive taskforce concept and lessons from their development may provide other countries with a flexible local implementation model for tobacco control.

PMID: 25575369 [PubMed - in process]


Abstract

INTRODUCTION: Smokeless tobacco use occupies a significant portion of overall tobacco consumption in Bangladesh. Yet very little is known about the effectiveness of tax and price policy in controlling the use of smokeless tobacco use in the country.

METHODS: The paper examines the price distribution of various smoked (cigarette, bidi) and smokeless tobacco products (zarda, gul) using the univariate Epanechnikov kernel density function. It estimates the own and cross price elasticity of demand for the most widely used smokeless tobacco product zarda using two-step regression analysis. The analysis is based on data from the ITC Bangladesh Wave 3 Survey which is a nationally representative cohort survey of tobacco users and nonusers conducted in in Bangladesh during 2011-12.

RESULTS: The price elasticity of lower price brands of zarda is estimated at -0.64 and of higher priced brands at -0.39, and the cross price elasticity of zarda with respect to cigarette price at 0.35. The tax increase on smokeless tobacco needs to be greater than the tax increase on smoked tobacco to bridge the wide price differential between the two types of products that currently encourages downward substitution from smoked to smokeless tobacco and discourages quitting behavior.

CONCLUSIONS: This paper argues that increasing tax on smokeless tobacco simultaneously with the tax increase on smoked tobacco can have significant negative impact on the prevalence of smokeless tobacco use in Bangladesh. Finally, a specific excise system replacing the existing ad valorem excise tax can substantially contribute to the revenue collection performance from smokeless tobacco products.

PMID: 25526246 [PubMed - in process]


Abstract

INTRODUCTION: Almost a fifth of the world's tobacco is consumed in smokeless form. Its consumption is particularly common in South Asia, where an increasing array of smokeless tobacco (SLT) products is widely available. Mindful of the growing public health threat from SLT, a group of international academics and policy makers recently gathered to identify policy and knowledge gaps and proposed strategies to address these.

METHODS: We reviewed key policy documents and interviewed policy makers and representatives of civil society organizations in 4 South Asian countries: Bangladesh, India, Nepal, and Pakistan. We explored if SLT features in existing tobacco control policies and, if so, the extent to which these are implemented and enforced. We also investigated barriers to effective policy formulation and implementation. The findings were presented at an international meeting of experts and were refined in the light of the ensuing discussion in order to inform policy and research recommendations.

RESULTS: We found that the existing SLT control policies in these 4 South Asian countries were either inadequate or poorly implemented. Taxes were low and easily evaded; regulatory mechanisms, such as licensing and trading standards, either did not exist or were inadequately enforced to regulate the composition and sales of such products; and there was little or no cessation support for those who wanted to quit.

CONCLUSIONS: Limited progress has been made so far to address the emerging public health threat posed by SLT consumption in South Asia. International and regional cooperation is required to advocate for effective policy and to address knowledge gaps.

PMID: 24616238 [PubMed - in process]

Abstract

BACKGROUND: In Bangladesh, the average excise tax on cigarettes accounted for just 38% of the average retail price of cigarettes in 2009, and 45% in 2010. Both these rates are well below the WHO recommended share of 70% of the retail price at a minimum. There is thus ample room for raising taxes on cigarettes in Bangladesh. The objective of the present work was therefore to estimate the price elasticity of demand for cigarettes and the effect of tax increases on the consumption of cigarettes and on tax revenue in Bangladesh.

METHODS: Based on data from Wave 1 (2009) and Wave 2 (2010) of the International Tobacco Control Bangladesh Survey, we estimated the overall impact of a price change on cigarette demand using a two-part model. The total price elasticity of cigarettes was measured by the sum of the elasticity of smoking prevalence and the elasticity of average daily consumption conditional on smoking participation. The price elasticity estimates were used in a simulation model to predict changes in cigarette consumption and tax revenue from tax and price increases.

RESULTS: The total price elasticity of demand for cigarettes was estimated at -0.49. The elasticity of smoking prevalence accounted for 59% of the total price elasticity. The price elasticity of cigarette consumption is higher for people belonging to lower socioeconomic status. Increases in taxes would result in a significant reduction in cigarette consumption while increasing tax revenue.

CONCLUSIONS: Raising cigarette prices through increased taxation could lead to a win-win-win situation in Bangladesh: it would reduce cigarette consumption, increase tobacco tax revenue and potentially decrease socioeconomic inequities.

PMID: 24105828[PubMed - indexed for MEDLINE] PMCID: PMC4090419


Abstract

The tobacco epidemic is an increasing threat to public health with the tobacco burden particularly high in WHO's South-East Asia Region (SEAR). The Region has many obstacles to tobacco control, but despite these challenges, significant progress has been made in many countries. Although much work still needs to be done, SEAR countries have nevertheless implemented strong and often innovative tobacco control measures that can be classified as "best practices," with some setting global precedents. The best practice measures implemented in SEAR include bans on gutka, reducing tobacco imagery in movies, and warning about the dangers of tobacco. In a time of scarce resources, countries in SEAR and elsewhere must ensure that the most effective and cost-efficient measures are implemented. It is hoped that countries can learn from these examples and as appropriate, adapt these measures to their own specific cultural, social and political realities.

PMID: 23442393 [PubMed - indexed for MEDLINE]


Abstract

The World Health Organization (WHO) Framework Convention on Tobacco Control (FCTC) requires health warnings on tobacco product packages sold in countries that ratified the WHO FCTC treaty (1). These warnings are expected to 1) describe the harmful effects of tobacco use; 2) be approved by the appropriate national authority; 3) appear on at least 30%, and ideally 50% or more, of the package's principal display areas; 4) be
large, clear, visible, and legible in the country’s principal language(s); 5) have multiple, rotating messages; and 6) preferably use pictures or pictograms. To assess the effects of cigarette package health warnings on interest in quitting smoking among smokers of manufactured cigarettes aged ≥15 years, this report examines 2008–2010 data from the Global Adult Tobacco Survey (GATS) in 14 WHO FCTC countries (including Bangladesh). Among men, the prevalence of manufactured cigarette smoking ranged from 9.6% in India to 59.3% in Russia. Among men in 12 of the countries and women in seven countries, >90% of smokers reported noticing a package warning in the previous 30 days. The percentage of smokers thinking about quitting because of the warnings was >50% in six countries and >25% in men and women in all countries except Poland. WHO has identified providing tobacco health information, including graphic health warnings on tobacco packages, as a powerful “best buy” in combating non communicable disease (2). Implementing effective warning labels as a component of a comprehensive approach can help decrease tobacco use and its many health consequences.

PMID: 21617629 [PubMed - indexed for MEDLINE]


Summary

Since 2007 the Bloomberg Global Initiative to Reduce Tobacco Use (BGI) is being implemented in the South-East Asia Region. Four countries from the Region - Bangladesh, India, Indonesia and Thailand - were selected as priority countries under the Initiative. In 2007 both human and financial support was provided to these countries to strengthen their capacity for tobacco control. The WHO South-East Asia Region was the first and only Region to have organized an orientation workshop for all BGI staff. The workshop was found to be useful for the implementation of the Initiative in the Region. It has also enhanced the knowledge and team spirit of the whole BGI team and provided a unique opportunity to discuss and share the challenges that the Initiative is facing in terms of coordination for effective implementation. The workshop provided the platform to discuss and decide on a common approach to take the Initiative to its logical fruition.


Abstract

Tobacco is currently the second major cause of death in the world. The tobacco consumption scenario in the SEAR is very high and issues are complex. Recent prevalence reports from countries like India and Bangladesh show an increasing prevalence among females.

In Bangladesh there are estimated 20 million tobacco users, 5 million of them are women. These estimates include smokeless tobacco also. A considerable amount of tobacco is produced in Bangladesh. Bangladesh was the world’s 18th leading tobacco producer in 1994, and continues to be the 4th largest producer of cigarettes in the Region. Tobacco-related illnesses such as cancer, cardiovascular and respiratory diseases are already major problems in Bangladesh as in most countries of this Region. Most of the victims in which heart attacks that occur below the age of 40 are heavy smokers. Tobacco poses a major challenge not only to health, but also to economic development.

Bangladesh has enacted a tobacco control law in 2005 in accordance with some of the provisions of WHO FCTC. However, having a law is not enough for implementing the tobacco control programme(s). Policy guidance and a detailed plan of action are needed. The provisions of the FCTC/Law should be appropriately reflected in the national policy and plan of actions in order to reduce tobacco consumption, to promote cessation of tobacco use, to protect nonsmokers from environmental tobacco smoke and to protect present and future generations from the devastating health, social, environmental and economic consequences of tobacco consumption and exposure to tobacco smoke. The tobacco control policy and plan of action provide a framework for comprehensive tobacco control in Bangladesh for three years, 2006-2008.
Having a national policy and plan of action will be the main tool and background document for mobilizing resources for tobacco control activities. Based on this document suitable proposal for resource mobilization would be developed. Donors will be approached with support from WHO for the fund.


Abstract

The study estimates the economic issues related to tobacco. Cigarette and bidi production in Bangladesh have been increasing since 1980. Imports and exports have fluctuated, but there is a persistent negative trade balance in tobacco and tobacco products. Recent prevalence trends are not clear, but remain over 40% among men. National statistics put smoking among women at 4-5%, but tobacco chewing is common among women, and undocumented. Prevalence is much higher for men with lower incomes and education. Policies to reduce tobacco use are summarized, they have been relatively weak, but would be greatly enhanced if proposed legislation is enacted. Money spent on tobacco products by poor people could do much to reduce malnutrition if it were spent on food instead. Real prices of cigarettes have fallen, and incomes have risen, stimulating consumption. Real price increases would help reduce demand, by 3% for every 10 real price increase. Taxes are relatively low (even for the highest priced, most taxed brands, only 55% of the retail price, plus a 15% value-added tax). Higher taxes would increase total revenues, already 7% of total government revenues. Inadequate data exist to estimate the health care costs attributable to tobacco use in Bangladesh.


Abstract

This report summarizes the health consequences and costs associated with tobacco use. It reviews price trends for tobacco products in Bangladesh, India, Indonesia, Nepal, Thailand and Sri Lanka. It reports trends in government tobacco tax revenues and how tobacco products are currently taxed in these countries, and in Maldives and Myanmar. The third section examines the demand for tobacco products in south-east Asian countries. A literature review on the demand for tobacco products in developing countries is followed by new analysis using time series and household-level data. The revenue-generating potential of tobacco taxes in south-east Asian countries is discussed. Finally, the report discusses contraband trade in tobacco products in South-East Asia, with emphasis on the industry's alleged role in smuggling.

4. Tobacco Promotion-Advertising and sponsorship


Abstract

BACKGROUND: While television advertisements (ads) that communicate the serious harms of smoking are effective in prompting quitting-related thoughts and actions, little research has been conducted among smokers in low- to middle-income countries to guide public education efforts.

METHOD: 2399 smokers aged 18-34 years in 10 low- to middle-income countries (Bangladesh, China, Egypt, India, Indonesia, Mexico, Philippines, Russia, Turkey and Vietnam) viewed and individually rated the same five
anti-smoking ads on a standard questionnaire and then engaged in a structured group discussion about each ad. Multivariate logistic regression analysis, with robust SEs to account for the same individual rating multiple ads, was performed to compare outcomes (message acceptance, perceived personalised effectiveness, feel uncomfortable, likelihood of discussing the ad) across ads and countries, adjusting for covariates. Ads by country interactions were examined to assess consistency of ratings across countries.

RESULTS: Three ads with graphic imagery performed consistently highly across all countries. Two of these ads showed diseased human tissue or body parts, and a third used a disgust-provoking metaphor to demonstrate tar accumulation in smokers’ lungs. A personal testimonial ad performed more variably, as many smokers did not appreciate that the featured woman’s lung cancer was due to smoking or that her altered physical appearance was due to chemotherapy. An ad using a visual metaphor for lung disease was also more variable, mostly due to lack of understanding of the term ‘emphysema’.

CONCLUSION: Television ads that graphically communicate the serious harms of tobacco use are likely to be effective with smokers in low- to middle-income countries and can be readily translated and adapted for local use. Ads with complex medical terms or metaphors, or those that feature personal testimonials, are more variable and at least require more careful pre-testing and adaptation to maximise their potential.

PMID: 21994276 [PubMed - indexed for MEDLINE]

Abstract

According to the 2012 Report of the U.S. Surgeon General, exposure to tobacco advertising, promotion, and sponsorship (TAPS) is associated with the initiation and continuation of smoking among young persons. The World Health Organization (WHO) Framework Convention on Tobacco Control (FCTC) requires countries to prohibit all forms of TAPS; the United States signed the agreement in 2004, but the action has not yet been ratified. Many countries have adopted partial bans covering direct advertising in traditional media channels; however, few countries have adopted comprehensive bans on all types of direct and indirect marketing. To assess progress toward elimination of TAPS and the level of awareness of TAPS among persons aged ≥15 years, CDC used data from the Global Adult Tobacco Survey (GATS) collected in 14 countries (including Bangladesh) during 2008-2010. Awareness of any TAPS ranged from 12.4% in Turkey to 70.4% in the Philippines. In the four countries where awareness of TAPS was ≤15%, three of the countries had comprehensive bans covering all nine channels assessed by GATS, and the fourth country banned seven of the nine channels. In 12 countries, more persons were aware of advertising in stores than advertising via any other channel. Reducing exposure to TAPS is important to prevent initiation of tobacco use by youths and young adults and to help smokers quit.

PMID: 22622091 [PubMed - indexed for MEDLINE]

Abstract

The majority of the world’s 1.3 billion tobacco users are men, but female use is increasing. To examine differences in tobacco use and awareness of tobacco marketing by sex, CDC and health officials in Bangladesh, Thailand, and Uruguay (among the first countries to report results) analyzed 2009 data from a newly instituted survey, the Global Adult Tobacco Survey (GATS). This report summarizes the results of that analysis, which indicated wide variation among the three countries in tobacco use, product types used, and marketing awareness among males and females. In Bangladesh and Thailand, use of smoked tobacco products was far greater among
An annotated bibliography of scientific studies done on tobacco topic in WHO South-East Asia Region countries

5. Tobacco economics including interference of the tobacco industry


Abstract

Cancer is predicted to be an increasingly important cause of morbidity and mortality in Bangladesh in the next few decades. The estimated incidence of 12.7 million new cancer cases will rise to 21.4 million by 2030. More than two-thirds of the total expenditure on health is through out-of-pocket payments. According to the Bangladesh Bureau of Statistics, cancer is the sixth leading cause of death. International Agency for Research on Cancer has estimated cancer-related death rates in Bangladesh to be 7.5% in 2005 and 13% in 2030. The two leading causes are in males are lung and oral cancer and in females are breast cancer and cervical cancer. Bangladesh is now in severe shortage of radiation therapy machines, hospital bed, trained oncoslogists, medical radiation physicists and technologists. Bangladesh having different cancers associated with smoking and smokeless tobacco use, Human papilloma virus infection, Hepatitis B and C infection, Helicobacter Pylori infection, arsenic contaminated groundwater, availability of chemical carcinogens mainly formalin treated fruits, fish and vegetables at open market, tannery waste contaminated with chromium (which is used for poultry feed and fish feed preparation). A World Health Organization study revealed the annual cost of illnesses in Bangladesh attributable to tobacco usage is US$ 500 million and the total annual benefit from the tobacco sector is US$ 305 million as tax revenue. Bangladesh has developed a National Cancer Control Strategy and Action Plan with the aim of delivering a universal, quality-based and timely service. Cancer prevention through tobacco control, health promotion and vaccination program, cancer early detection program for oral cavity, breast and cervix has initiated. Cancer detection and diagnostic facilities will be made available at medical colleges and district-hospitals and establish a referral chain. National capacity development, more cancer research will allow Bangladesh to deal effectively and efficiently with the cancer problems through evidence-based decision making.

PMID: 24163419 [PubMed - indexed for MEDLINE] PMCID: PMC3842101


Abstract

OBJECTIVES: This study sought to increase government, civil society and media attention to the tobacco-poverty connection in Bangladesh, particularly as it relates to bidi-dependent livelihoods.

DATA SOURCES: This study consisted of a literature review that examined the socioeconomic impacts of tobacco farming, the working conditions of tobacco workers and the impact of tobacco on consumers, and a primary research study among bidi workers and users. The research included in-depth and semi structured interviews and focus group discussions among bidi workers and a closed-ended quantitative survey among bidi users.

DATA SYNTHESIS: Most bidi worker families earn about $6.40 per 7-day work week, leaving them below the poverty line. The majority of bidi workers are women and children, classified as unpaid assistants, who toil long hours in toxic environments. Bidi users are primarily low-income earners who spend up to 10% of their daily income on bidis; the average proportion of income spent on bidis decreased as income increased. If bidi expenditures were reduced and spent instead on food or local transportation, many higher value jobs could be created. This could also mean better health and nutrition for those currently engaged in bidi work.
CONCLUSIONS: The results of this study illustrate the linkages between tobacco and poverty. Tobacco control is not simply about health and the environment, but also about the living conditions of the poorest of the poor. If we are to improve the lives of the poor, we must address the root causes of poverty, which include the production and use of tobacco.

PMID: 21775505 [PubMed - indexed for MEDLINE]


Abstract

Bidis, or hand-rolled, filterless tobacco cigarettes, are largely marketed to and consumed by the poor in Bangladesh. In exploring perceived rationales and the situational contexts of smoking, this study identifies the crucial connections between bidis smoking and the social and economic forces that influence choices and shape the contexts of individual suffering. Ethnographic research in Netrakona District revealed that inexpensive bidis were used to gain relief from physical ailments specific to the poor, such as hunger, indigestion and constipation. Bidis were found to be a socially accepted mood-altering drug that symbolizes relief from their everyday tensions, anger, perceived exploitations and disappointments. I argue that both cultural norms of reciprocity and hierarchy as well as the socio-economic structure of Bangladesh with its inequality, poverty and exploitation contribute to the tobacco consumption and related health problems of the poor.

PMID: 17728033 [PubMed - indexed for MEDLINE]


Abstract

This study examined the relationship between tobacco prices and child health outcomes so as to assess the potential of improved child health outcomes resulting from less tobacco expenditure. In part, this paper was motivated by a study by Efroymson et al. [(2001). Hungry for tobacco: An analysis of the economic impact of tobacco consumption on the poor in Bangladesh. Tobacco Control, 10, 212-217] suggesting that for the poorest households in Bangladesh, amongst whom malnutrition is widespread, shifting tobacco expenditures to expenditures on food would significantly improve the nutritional status of the household. We used data from a survey of 956 households conducted in rural Bangladesh between June 1996 and September 1997. The households were surveyed four times at approximately 4-month intervals during the 16-month period. We restricted our sample to households with children aged 2-10, and 600 households satisfied this criterion. The primary dependent variables for this study are three anthropometric indicators of child health and nutritional status: a standardized measure of height for age, a standardized measure of weight for height, and a standardized measure of weight for age. We also used measures of self-reported morbidity, including the incidence and duration of respiratory illness. We used regression methods on data averaged across survey rounds to estimate the relationship between tobacco prices and the outcome variables. Tobacco prices were found to be a significant determinant of height for age and weight for height for both boys and girls. Furthermore, the price of tobacco products is a significant predictor of weight for age for girls and the pooled sample. Our results suggest that higher tobacco prices would, for the most part, improve child health.

PMID: 17728033 [PubMed - indexed for MEDLINE]


Summary

Use of tobacco and exposure to second-hand smoke are major contributors to the chronic disease and economic burden of citizens. They also have a negative impact on the national economy of Bangladesh. Scientific research has revealed that tobacco control actually brings significant health and economic benefits without harming the economy. The present study on the impact of tobacco-related illnesses in Bangladesh presents scientific evidence for strengthening tobacco control measures in the country for consequent economic gain at both individual and national levels, and for an overall reduction of morbidity and mortality due to tobacco use.
BHUTAN

1. Tobacco use surveillance (surveys and report)


Abstract

The International Tobacco Control Policy Evaluation Project (the ITC Project) is a multi-country prospective cohort study designed to measure the psycho social and behavioral impact of key policies of the WHO Framework convention on Tobacco control (FCTC).

This report presents results of the ITC Bhutan Survey a face-to-face survey of 251 tobacco users and 1,555 of non-tobacco users of tobacco in four districts of Bhutan- Bumthang, Chuuka, Thimpu and Trashigang- conducted between September and November 2009.

1.1. Youth in general


1.1.1. Global Youth Tobacco Surveys (GYTS)


Abstract

BACKGROUND: At least two rounds of the Global Youth Tobacco Survey (GYTS) have been completed in most of the countries in the World Health Organization South-East Asia region. Comparing findings from these two rounds provides trend data on smokeless tobacco (SLT) use for the first time.

METHODS: This study uses GYTS data from Bangladesh, Bhutan, India, Indonesia, Maldives, Myanmar, Nepal, Sri Lanka, Thailand, and Timor-Leste during 2006-2013. GYTS is a nationally representative survey of 13-15-year-old students using a consistent and standard protocol. Current SLT use is defined as using any kind of SLT products, such as chewing betel quid or non betel quid or snuffing any other products orally or through the nasal route, during the 30 days preceding the survey. Prevalence and 95% confidence intervals were computed using SAS/SUDAAN software.

RESULTS:

According to most recent GYTS data available in each country, the prevalence of current use of SLT among youth varied from 5.7% in Thailand to 23.2% in Bhutan; among boys, from 7.1% in Bangladesh to 27.2% in Bhutan; and among girls, from 3.7% in Bangladesh to 19.8% in Bhutan. Prevalence of SLT was reported significantly higher among boys than girls in Bhutan (boys 27.2%; girls 19.8%), India (boys 11.1%; girls 6.0%), Maldives (boys 9.2%; girls 2.9%), Myanmar (boys 15.2%; girls 4.0%), and Sri Lanka (boys 13.0%; girls 4.1%). Prevalence of current SLT use increased in Bhutan from 9.4% in 2009 to 23.2% in 2013, and in Nepal from 6.1% in 2007 to 16.2% in 2011.

CONCLUSION: The findings call for countries to implement corrective measures through strengthened policy and enforcement.

PMID: 25526249 [PubMed - in process]
Bhutan


Abstract

Tobacco use is the leading preventable cause of death and disease in the world; yet little is known about the levels or patterns of youth tobacco use on a global basis. The purpose of this paper is to focus on change in youth tobacco use using data from 100 sites that have conducted repeat Global Youth Tobacco Surveys (GYTS). The GYTS is a school-based survey that collects data from students aged 13-15 years using a standardized methodology for constructing the sample frame, selecting schools and classes, and processing data. GYTS is conducted in school classes using self-administered anonymous data collection. The GYTS sample produces representative, independent, cross-sectional estimates for each sampling frame. Of the 100 sites surveyed, 61 reported no change over time in prevalence of cigarette smoking, likewise in 50 of the 97 sites with data on use of other tobacco products there was no change. However, 34 sites reported an increase in other tobacco use. This appears to be attributed to waterpipe, an emerging trend in tobacco use. Evidence was found supporting the idea that tobacco use among adolescent girls is likely increasing. The global tobacco control effort continues to face many challenges in reversing the tobacco epidemic. Few countries have implemented comprehensive tobacco control legislation laid out by the World Health Organization. The few countries that have adopted some of these proven policies can serve as examples in achieving positive results in curbing the tobacco epidemic.

PMID: 19770234 [PubMed - indexed for MEDLINE]


Abstract

OBJECTIVE: This cross-sectional study aimed to determine the prevalence of betel quid chewing and related factors including general characteristics, behavioral pattern, perception and social influences among health care providers in Thimphu, Bhutan.

MATERIAL AND METHOD: A self-administered questionnaire was handed to 478 health care providers working in different units of health care centers in Thimphu during June-July 2010. A total of 391 (81.8%) questionnaires were returned. Chi-square test and multiple logistic regression were applied.

RESULTS: The prevalence of current betel quid chewers among this group was 26.6%. Males chewed betel quid more than females (29.5%, 23.9% respectively). Forty-two percent of current chewers had no specific reasons for chewing betel quid, although 18.2% declared that they were addicted. Both friends and family members were key persons involved in influencing betel quid chewing. Marital status was significantly associated with betel quid chewing, married health care providers being 2 times more likely to chew betel quid (OR = 2.09, 95% CI = 1.02-4.28) than those of single marital status. Similarly, those coming from West Bhutan, were 2 times more likely to be currently using betel quid (OR = 2.71, 95% CI = 1.32-5.55) than other regions. Health care providers from families with more than half of their members chewing betel quid were 14 times more likely to be currently chewing it (OR = 14.52, 95% CI = 6.02-35.04) than families having none of their members chewing it. Health care smokers were more likely to chew betel quid than non-smoking ones (p-value = 0.012). Also occasional drinkers were 3 times more likely to be currently using betel quid (OR = 3.52, 95% CI = 1.78-6.96). Those who perceived a high barrier to quit chewing were about 2.6 times more likely to be current chewers of betel quid, than those who perceived less of a barrier to quit (OR = 2.62, 95% CI = 1.21-5.67).

CONCLUSION: The present study revealed betel quid chewing prevalence rate of 26.6%. Of the various factors considered under study, marital status, region of origin, family members chewing betel quid, status of smoking and drinking were statistically proven significant.

PMID:23130501[PubMed - indexed for MEDLINE]
1.2. Educational Personnel and other professional Groups

1.2.1. Global School Personnel Survey (GSPS)


1.3. Women


2. Tobacco related Mortality & Morbidity


Abstract

Chronic obstructive pulmonary disease (COPD) is a leading cause of morbidity and mortality worldwide. The World Health Organization (WHO) estimated that COPD is currently the seventh leading cause of death and disability worldwide, but will rise to the fifth position by 2020. The estimated prevalence of COPD worldwide in 2001 was 1013/100,000 population; it was highest in the Western Pacific Region and lowest in Africa. The mortality from COPD followed the same pattern. The prevalence of smoking is slowly decreasing in the industrialised world and rising in developing countries, especially in Asia and Africa. Cigarette consumption per adult has also decreased in the Americas, remained the same in Europe but increased in all other regions, especially the Western Pacific. Indoor air pollution from combustion of biomass/traditional fuels and coal, previous tuberculous infection, outdoor air pollution and childhood respiratory infections are other important risk factors for COPD in developing countries. The rise in morbidity and mortality from COPD will be most dramatic in Asian and African countries over the next two decades, mostly due to progressive increase in the prevalence of smoking. As developing countries can ill afford the added economic burden of COPD and other smoking-related diseases, there is an urgent need for multi-dimensional actions in reducing the main risk factor of cigarette smoking.

Comment in

- Management of chronic obstructive pulmonary disease in Asia and Africa. [Int J Tuberc Lung Dis. 2004]

PMID: 14974740 [PubMed - indexed for MEDLINE]

3. Tobacco control interventions (including policies, legislations and taxation)


Abstract

The tobacco epidemic is an increasing threat to public health with the tobacco burden particularly high in WHO's South-East Asia Region (SEAR). The Region has many obstacles to tobacco control, but despite these challenges, significant progress has been made in many countries. Although much work still needs to be done, SEAR countries have nevertheless implemented strong and often innovative tobacco control measures that can be classified as "best practices," with some setting global precedents. The best practice measures implemented in SEAR include bans on gutka, reducing tobacco imagery in movies, and warning about the dangers of tobacco. In a time of scarce resources, countries in SEAR and elsewhere must ensure that the most effective and cost-efficient measures are implemented. It is hoped that countries can learn from these examples and as appropriate, adapt these measures to their own specific cultural, social and political realities.

PMID: 23442393 [PubMed - indexed for MEDLINE]

Abstract

This paper examines policy outputs associated with the 2004 Bhutan anti-tobacco law, including 2009 amendments, to determine if the law is congruent with punctuated equilibrium or social policy realism theories of policy change. There was no direct and sudden tobacco policy output change in Bhutan due to a shock to the policy system contrary to what punctuated equilibrium theory would predict. Rather, policy change was sweeping but none punctuated. This paper reconfirms prior findings of social policy realism theory that various and complex policy output patterns occur due to a mixture of contingent and complex factors. Under social policy realism, a complex interplay of factors drive policy with the state, corporate actors, and interest groups, and the market often playing a primary role. These complex policy outputs have a direct impact on society and the natural environment reflected in government policy output actions or inactions.


Abstract

From 1991 to 2004, a significant grassroots campaign, in the eastern Himalayan Kingdom of Bhutan, that included urban and rural people and Buddhist monks, called for national legislation to ban tobacco sales. In 2004, Bhutan banned all tobacco sales and restricted smoking in public areas, but permitted the importation, with a high duty and sales tax, of small amounts of tobacco products for personal use. From 2004 to 2009, this novel experiment in tobacco control resulted in a strong black market, considerable tobacco smuggling, and continued tobacco use by crucial sectors of the population, particularly minors. In response, in 2009, Bhutan passed important amendments to its 2004 anti-tobacco law that tightened administration and enforcement efforts, established specific penalties for violations, and monitored tobacco consumption trends. However, if tobacco consumption trends do not improve and smuggling is not successfully counter-acted, Bhutan should consider changing, to some degree or in total, its anti-tobacco program.


Summary

Tobacco Cessation: A Manual for Nurses, Health Workers and other Health Professionals is a comprehensive manual on tobacco cessation. It provides a detailed overview of the extent and patterns of use of tobacco products in the South-East Asia (SEA) Region and the related health burden. Among the top 10 countries globally with the highest levels of tobacco use among males, as many as three are from the SEA Region. The Manual highlights the need to provide tobacco cessation interventions by nurses, health workers and other health professionals, and graphically depicts the adverse health effects of tobacco on almost all organs of the human body. In the section on interventions, the Manual reiterates that tobacco cessation efforts start with the successful identification of tobacco use. It provides effective tools and techniques for tobacco cessation interventions, including visits and follow-up of patients, listing of pros and cons, worksheets, group-based interventions and pharmacotherapy. Apart from the usual methods of cessation such as tapering off and abrupt cessation (‘cold turkey’), the Manual also lists new and innovative interventions such as the ‘Recovery Calendar’. Above all, the Manual highlights the importance of recognizing the dangerous effects of tobacco use, the benefits of quitting and the need to provide effective follow-up to prevent ‘lapse’ and ‘relapse’. It includes a series of succinct, ready-to-use methods, counselling techniques and model motivational tools that can be practised by the health professional to promote tobacco cessation.

An annotated bibliography of scientific studies done on tobacco topic in WHO South-East Asia Region countries

Summary

Helping People Quit Tobacco: A Manual for Doctors and Dentists is a comprehensive dossier on tobacco cessation with the help of intervention from doctors and dentists. The document begins with the premise that the core responsibility of any doctor or dentist includes reducing the use of tobacco among his patients and in the community, and encouraging tobacco cessation. The importance of the TEACH tool to meet the MPOWER goals of the World Health Organization are also enunciated. The Manual cites relevant statistics from the apex global tobacco surveys to highlight the extent and enormity of the tobacco epidemic in the South-East Asia Region, and also outlines the nature of harm caused by tobacco use, its inherent links with several debilitating diseases and the manifold risks of using smoking and smokeless tobacco products. The Manual encourages doctors and dentists to identify at the earliest possible stage tobacco use in a patient, and provides step-by-step guidelines on intervention and assisted cessation through counselling, motivational tools and medication or pharmacotherapy. A concluding section provides details on 'lapse' and 'relapse' and how to overcome the same.


Summary

Reducing the use of tobacco is a complex task as it involves enormous socio-cultural and health dimensions. It requires a multi-sectoral and integrated approach that includes consistent and continuous communication for behavioural and social change. Communication as such, is a strategic process to influence individual and group behaviour that needs systematic planning and implementation. This document tends to define the framework and the key elements of communication for tobacco control to be used in the Member States of the South-East Asia Region. It focuses on the major approaches of communication and guiding principles for planning and using the communication components for designing the effective communication for tobacco control programme. It suggests a model for communication planning based on communication objectives, target groups and potential barriers which determines the communication approach, message development and selection of media. It emphasizes on the importance of using media mix, partnership, capacity building and regular evaluation of communication activities.


Summary

Trade liberalization programme has become operational through the introduction of the South Asian Free Trade Area (SAFTA) among South Asian nations. The agreement includes tobacco and tobacco products under the "Sensitive List". This document lists ways in which trade in tobacco products can be managed under SAFTA in the context of the WHO Framework Convention on Tobacco Control.


Summary

Smoking and exposure to second-hand smoke (SHS) are major contributors to the chronic disease burden in the South-East Asia Region. Due to weak tobacco control measures, especially inadequate measures in the area of SHS, a very large population in the Region is exposed to SHS. The regional profile on Smoke-free Environments depicts the situation with respect to exposure to SHS in the Region. It also describes briefly the existing
measures in the Region for protecting people from SHS exposure. Making environments completely smoke-free is the most effective way to protect the population from exposure to SHS everywhere, including public places and workplaces. This can only be done by developing and strengthening smoke-free policies and legislation, and enforcing the same.


Summary

This Manual is designed for teachers who work with 13-15-year-old students in Member countries of the World Health Organization (WHO)'s South-East Asia (SEA) Region. The Manual uses skill-based health education through curricular and co-curricular activities. Skill-based health education is designed to help students acquire the knowledge, attitude and skills that are needed to make informed choices and decisions, understand the consequences of tobacco use and tobacco advertising, adopt and practise healthy behaviours to avoid risks and create conditions that are conducive to health. This approach also empowers students to contribute to the creation of tobacco-free environment in which they learn and live. The Manual provides young people with an opportunity to participate in an environmental approach to tobacco control. The decision that young people make about tobacco use are heavily influenced by the physical, social, economic and legal environments in which they live. The activities in the Manual represent a departure from the traditional approach of simply educating students not to use tobacco, which is often considered an ineffective strategy. The progressive vision helps young people move beyond a reliance on awareness education to embrace a comprehensive and science-based approach. The focus in the Manual is on what young people can do to create tobacco-free norms and environments and to thwart manipulative efforts of the tobacco industry to create tobacco addictions. The Manual includes classroom activities which a school can adopt either in the form of a regular or optional curriculum. It uses a series of activities which can be carried out as interactive/participatory activities in classrooms (curricular), or as field activities in the community (co-curricular activities). A participatory approach gives students the opportunity to observe and actively practice skills, thus being engaged in "learning by doing." In order to make these activities interactive, the class is split into small working groups and discussions are held in bigger groups based on inputs from the smaller groups. Schools that would use this Manual may adopt a similar pattern or can modify it according to their situations and needs. Teaching posters, handouts, worksheets, and answer sheets, are provided in this Manual to be used in any combination by the teacher or simply as a guide for teaching. Additionally, clippings from newspapers, a few sets of graph paper, pencils, a black board, and chalk may be used as supplementary materials by the teacher.


(No abstract available)

PMID: 15704290 [PubMed - indexed for MEDLINE]


Abstract

Significant achievements in the area of tobacco control have been made in the kingdom of Bhutan in the Eastern Himalayas, following the initiation of several tobacco control activities.

PMID: [PubMed - indexed for MEDLINE] PMCID: PMC1747804

4. Tobacco economics including tobacco interference of the tobacco industry


An annotated bibliography of scientific studies done on tobacco topic in WHO South-East Asia Region countries
Tobacco economics including tobacco interference of the tobacco workplaces. This can only be done by developing and strengthening smoke-free policies and legislation, and is the most effective way to protect the population from exposure to SHS everywhere, including public places and measures in the Region for protecting people from SHS exposure. Making environments completely smoke-free...
The machine for manufacturing the plates and cups from areca nut sheaths explored and the CAFCO members were then further supported for a study visit to Barpeta in Assam to learn more about the machine technicalities and products besides markets opportunities in India. The visit strengthened connectivity and rewarded with more ideas on setting up a plant and processing modalities to manufacture plates and cups from fallen arecanut sheaths which was just right alternative to diversify activities and generate income in the uncertainty of weather and climatic variability. SNV Bhutan under Climate-smart Agriculture project has financed the cost of machine, exploration visit and in-house capacity development. The support was also extended for inauguration of the manufacture plant at Chhuzagang with the objective to provide adequate information nationwide to link with markets of the eco-friendly products.
An annotated bibliography of scientific studies done on tobacco topic in WHO South-East Asia Region countries

1. Surveillance (Tobacco use surveys and reports)

Sarna L, Danao LL, Chan SS et al. Tobacco control curricula content in baccalaureate nursing programs in four Asian nations. Nurs Outlook. 2006 Nov-Dec; 54(6):334-44.

Abstract

In Asia there is widespread smoking among men; smoking among women and youth is increasing, and quitting tobacco use is rare. The involvement of nurses, as the largest group of healthcare professionals, in tobacco control efforts is essential. The findings of this survey of 282 (69% response rate) baccalaureate nursing programs in 4 countries in Asia (China, Japan, Korea, and the Philippines) revealed that the majority included content on health risks of smoking (92%), but almost half (49%) did not provide smoking cessation content, and 94% did not cover it in-depth. Only 11% of programs included supervised cessation practice with patients. Fewer than 10% reported in-depth coverage of cessation interventions and few reported opportunities for clinical practice of cessation skills. Most schools surveyed delivered < 1 hour of instruction each year on tobacco control. Further educational efforts are needed to prepare future nurses to assist smokers with smoking cessation. Tobacco use is one of the leading causes of death worldwide, and tobacco-induced deaths in Asia continue to rise. The Western Pacific accounts for one-third of the cigarettes smoked in the world (25% in China alone) and 20% of the 5 million annual deaths from tobacco. China is expected to lead the world in tobacco-related deaths by 2025. Countries in Asia have widespread smoking, especially among men. There is a disturbing increase in smoking among women and youth, quitting tobacco use is rare, and exposure to second-hand smoke is common. Considering the immensity of the problem, all health care professionals throughout the world need to be actively engaged in tobacco control measures, including prevention, cessation, and reduction of exposure to second-hand smoke. Training health care professional students about these issues can have a profound impact on public health. In recognition of the importance of involvement of health care professionals, the World Health Organization (WHO) highlighted their role in tobacco control during "World No Tobacco Day" on May 31, 2005. The involvement of nurses, as the largest group of health care professionals, could boost these efforts. Thus, education of nurses regarding the multiple aspects of tobacco control has strategic implications in controlling global tobacco use and promoting health.

PMID: 17142152 [PubMed - indexed for MEDLINE]

2. Tobacco related Mortality & Morbidity


Abstract

The objective of this research was to investigate the relationship between lung cancer mortality rates, carcinogenic polycyclic aromatic hydrocarbon (PAH) emissions, and smoking on a global scale, as well as for different socioeconomic country groups. The estimated lung cancer deaths per 100,000 people (ED100000) and age standardized lung cancer death rate per 100,000 people (ASDR100000) in 2004 were regressed on PAH emissions in benzo[a]pyrene equivalence (BaPeq), smoking prevalence, cigarette price, gross domestic product per capita, percentage of people with diabetes, and average body mass index using simple and multiple linear regression for 136 countries. Using stepwise multiple linear regression, a statistically significant positive linear relationship was found between loge(ED100000) and loge(BaPeq) emissions for high (p-value <0.01) and for the combination of upper-middle and high (p-value <0.05) socioeconomic country groups. A similar relationship was found between loge(ASDR100000) and loge(BaPeq) emissions for the combination of upper-middle and high (p-value <0.01) socioeconomic country groups. Conversely, for loge(ED100000) and loge(ASDR100000), smoking prevalence was the only significant independent variable in the low socioeconomic country group (p-value <0.001). These results suggest that reducing BaPeq emissions in the U.S., Canada, Australia, France, Germany, Brazil, South Africa, Poland, Mexico, and Malaysia could reduce ED100000, while reducing smoking prevalence in Democratic People's Republic of Korea, Nepal, Mongolia, Cambodia, and Bangladesh could significantly reduce the ED100000 and ASDR100000.

PMID: 23472838 [PubMed - indexed for MEDLINE] PMCID: PMC3634325
3. **Tobacco control interventions (including policies, legislations and taxation)**


**Summary**

This Regional Strategy for Tobacco Control primarily provides a longer-term strategic guidance to Member States of the South-East Asia Region to support them in formulating evidence-based policies and designing a sustained and cost-effective programme on tobacco control to counter successfully the rising public health concerns of tobacco use in the Region. The Region is home to around 250 million smokers and nearly the same number of smokeless tobacco users. About 1.3 million deaths occur every year, including around 160,000 deaths due to exposure to second-hand smoke. The increasing trend of tobacco use and its devastating effects pose a grave threat to the health and well-being of the people of the Region. Thus, the implementation of the Regional Strategy is expected to eventually protect the people of the Region from the enormous negative health, social, economic and environmental consequences of tobacco consumption and exposure to tobacco smoke.

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**Summary**

This profile on the implementation of the WHO Framework Convention on Tobacco Control in the South-East Asia Region provides an overview of the status of the implementation of the convention in the eleven Member States of the SEA Region. It highlights some major milestones achieved as well as the challenges faced while implementing tobacco control measures in Member countries.

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**Summary**

Smokeless tobacco consumption in the South-East Asia Region is a growing threat to health. The region is a hub for smokeless tobacco production and use. This category of tobacco product is manufactured in various forms. The diversity of these tobacco products, their availability and affordability make them obvious alternatives to the relatively more expensive cigarettes. However, the dangers and risks associated with smokeless tobacco are not well understood by the population. Smokeless tobacco is not perceived as an urgent threat in many of the Member countries and consequently, tobacco control efforts for this type of tobacco use are not intense. The tobacco control agenda needs to keep up the pressure and apply a wider approach and holistic strategies to address this issue. To this end, the "Expert Group Meeting on Smokeless Tobacco Control and Cessation" was convened in New Delhi, India, on 16-17 August 2011. The meeting allowed experts to share information, identify the next steps on smokeless tobacco control and cessation, and provide inputs to a policy paper to be published later. This report compiles the issues faced by Member States concerning smokeless tobacco and provides recommendations to policy-makers and stakeholders.

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Abstract

The birth of the WHO Framework Convention on Tobacco Control (WHO FCTC) took place in response to the global tobacco epidemic and it became the most important global tobacco control instrument. Duly recognizing tobacco use as an important public health problem and in the wake of rising prevalence of and mortality related to tobacco use, almost all Member States of the South-East Asia Region signed and ratified the WHO FCTC. Following the ratification, Member countries have enacted comprehensive national tobacco control laws and regulations. Most countries have covered some important provisions, such as tax and price measures, smoke-free places, health warnings, a ban on tobacco advertising and promotion, and a ban on tobacco sales to minors. In spite of innumerable constraints and challenges, particularly human, infrastructural and financial resources, Member countries have been doing their best to enforce those legislations and regulations as effectively as possible. In order to educate the general public on the harmful effects of tobacco, mass health campaigns have been organized which are being continued and sustained. However, some of the important areas that need attention in due course of time are tax raises, illicit trade, tobacco industry interference and alternate cropping systems. All Member States in the Region are striving harder to achieving the goals and provisions of the Framework Convention through actively engaging all relevant sectors and addressing the tobacco issue holistically, and thus protecting the present and future generations from the devastating health, social, economic and environmental consequences of tobacco consumption and exposure to tobacco smoke.

PMID: 22089686/[PubMed - indexed for MEDLINE]


Summary

Tobacco Cessation: A Manual for Nurses, Health Workers and other Health Professionals is a comprehensive manual on tobacco cessation. It provides a detailed overview of the extent and patterns of use of tobacco products in the South-East Asia (SEA) Region and the related health burden. Among the top 10 countries globally with the highest levels of tobacco use among males, as many as three are from the SEA Region. The Manual highlights the need to provide tobacco cessation interventions by nurses, health workers and other health professionals, and graphically depicts the adverse health effects of tobacco on almost all organs of the human body. In the section on interventions, the Manual reiterates that tobacco cessation efforts start with the successful identification of tobacco use. It provides effective tools and techniques for tobacco cessation interventions, including visits and follow-up of patients, listing of pros and cons, worksheets, group-based interventions and pharmacotherapy. Apart from the usual methods of cessation such as tapering off and abrupt cessation ('cold turkey'), the Manual also lists new and innovative interventions such as the ‘Recovery Calendar’. Above all, the Manual highlights the importance of recognizing the dangerous effects of tobacco use, the benefits of quitting and the need to provide effective follow-up to prevent 'lapse' and 'relapse'. It includes a series of succinct, ready-to-use methods, counselling techniques and model motivational tools that can be practised by the health professional to promote tobacco cessation.


Summary

Helping People Quit Tobacco: A Manual for Doctors and Dentists is a comprehensive dossier on tobacco cessation with the help of intervention from doctors and dentists. The document begins with the premise that the core responsibility of any doctor or dentist includes reducing the use of tobacco among his patients and in the community, and encouraging tobacco cessation. The importance of the TEACH tool to meet the MPOWER goals of the World Health Organization are also enunciated. The Manual cites relevant statistics from the apex global tobacco surveys to highlight the extent and enormity of the tobacco epidemic in the South-East Asia Region, and also outlines the nature of harm caused by tobacco use, its inherent links with several debilitating diseases and the manifold risks of using smoking and smokeless tobacco products. The Manual encourages doctors and dentists to identify at the earliest possible stage tobacco use in a patient, and provides step-by-step guidelines on intervention and assisted cessation through counselling, motivational tools and medication or pharmacotherapy. A concluding section provides details on 'lapse' and 'relapse' and how to overcome the same.

Summary

Reducing the use of tobacco is a complex task as it involves enormous socio-cultural and health dimensions. It requires a multi-sectoral and integrated approach that includes consistent and continuous communication for behavioural and social change. Communication as such, is a strategic process to influence individual and group behaviour that needs systematic planning and implementation. This document tends to define the framework and the key elements of communication for tobacco control to be used in the Member States of the South-East Asia Region. It focuses on the major approaches of communication and guiding principles for planning and using the communication components for designing the effective communication for tobacco control programme. It suggests a model for communication planning based on communication objectives, target groups and potential barriers which determines the communication approach, message development and selection of media. It emphasizes on the importance of using media mix, partnership, capacity building and regular evaluation of communication activities.


Summary

Since 2007 the Bloomberg Global Initiative to Reduce Tobacco Use (BGI) is being implemented in the South-East Asia Region. Four countries from the Region - Bangladesh, India, Indonesia and Thailand - were selected as priority countries under the Initiative. In 2007 both human and financial support was provided to these countries to strengthen their capacity for tobacco control. The WHO South-East Asia Region was the first and only Region to have organized an orientation workshop for all BGI staff. The workshop was found to be useful for the implementation of the Initiative in the Region. It has also enhanced the knowledge and team spirit of the whole BGI team and provided a unique opportunity to discuss and share the challenges that the Initiative is facing in terms of coordination for effective implementation. The workshop provided the platform to discuss and decide on a common approach to take the Initiative to its logical fruition.


Summary

Smoking and exposure to second-hand smoke (SHS) are major contributors to the chronic disease burden in the South-East Asia Region. Due to weak tobacco control measures, especially inadequate measures in the area of SHS, a very large population in the Region is exposed to SHS. The regional profile on Smoke-free Environments depicts the situation with respect to exposure to SHS in the Region. It also describes briefly the existing measures in the Region for protecting people from SHS exposure. Making environments completely smoke-free is the most effective way to protect the population from exposure to SHS everywhere, including public places and workplaces. This can only be done by developing and strengthening smoke-free policies and legislation, and enforcing the same.


Summary

This Manual is designed for teachers who work with 13-15-year-old students in Member countries of the World Health Organization (WHO)’s South-East Asia (SEA) Region. The Manual uses skill-based health education through curricular and co-curricular activities. Skill-based health education is designed to help students acquire the knowledge, attitude and skills that are needed to make informed choices and decisions, understand the consequences of tobacco use and tobacco advertising, adopt and practise healthy behaviours to avoid risks and create conditions that are conducive to health. This approach also empowers students to contribute to the creation of tobacco-free environment in which they learn and live. The Manual provides young people with an opportunity to participate in an environmental approach to tobacco control. The decision that young people make about tobacco use are heavily influenced by the physical, social, economic and legal environments in which they live. The activities in the Manual represent a departure from the traditional approach of simply educating students not to use tobacco, which is often considered an ineffective strategy. The progressive vision helps young people move beyond a reliance on awareness education to embrace a comprehensive and science-based approach. The focus in the Manual is on what young people can do to create tobacco-free norms and environments and to thwart manipulative efforts of the tobacco industry to create tobacco addictions. The Manual includes classroom activities which a school can adopt either in the form of a regular or optional curriculum. It uses a series of activities which can be carried out as interactive/participatory activities in classrooms (curricular), or as field activities in the community (co-curricular activities). A participatory approach gives students the opportunity to observe and actively practice skills, thus being engaged in "learning by doing." In order to make these activities interactive, the class is split into small working groups and discussions are held in bigger groups based on inputs from the smaller groups. Schools that would use this Manual may adopt a similar pattern or can modify it according to their situations and needs. Teaching posters, handouts, worksheets, and answer sheets, are provided in this Manual to be used in any combination by the teacher or simply as a guide for teaching. Additionally, clippings from newspapers, a few sets of graph paper, pencils, a black board, and chalk may be used as supplementary materials by the teacher.


Summary

As part of the General Obligations under Article 5 of the WHO Framework Convention on Tobacco Control (FCTC), each Party shall develop, implement and periodically update and review multisectoral national tobacco control strategies, plans of action and programmes in order to fully comply with the provisions of the Convention. In order to provide some general guidelines on how to develop these strategies and plans of action, the Regional Strategy for Tobacco Control and Regional Plan of Action for Tobacco Control were developed by the Regional Office. The Regional Strategy contains the vision and strategic plan for tobacco control in the WHO South-East Asia Region for the next five years (2006-2010). The Plan of Action was based on the Regional Strategy for Tobacco Control (2006-2010). While the Convention provides guidelines to reduce the harm from tobacco, definitive actions to control tobacco have to take place at the country level. The successful implementation of the FCTC provisions depends almost entirely on the ability of the countries. Some countries in the Region have already developed their national strategies and plans of action and others are in the process of doing so. These two documents would be helpful in revising the existing national strategies and plans of action in countries that have already developed the same to make them fully compatible with the WHO FCTC. The documents would also be helpful developing national strategies and plans of action by countries which have not yet done so.


Summary

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Summary

The manual is intended primarily for people who work in a health facility serving a 'local' population. A doctor or nurse or someone else in the health facility can use the guidelines to create changes in the communities served by them. But people outside the medical or health professions too can use these guidelines effectively. The interventions (except sections in chapter 8 on 'cessation') can be implemented by any concerned individual, and do not require special medical expertise. The manual can be used for self-instruction or for training. The activities suggested are for implementation at the level of local communities, not at national level. So the emphasis is on action relevant to a community or a clinic.

4. Tobacco promotion: Advertising and sponsorship


Summary:

Over the past 20 years, with the liberalization of international trade, trade in tobacco and tobacco products has rapidly expanded. This has led to a corresponding rise in tobacco consumption across low- and middle-income countries since the 1980s, and poses a major threat to global public health. This phenomenon highlights the inevitable connection between international trade agreements and the tobacco control policies enshrined in the WHO Framework Convention on Tobacco Control (FCTC). An Expert Intercountry Consultation on Tobacco and Trade was held at the WHO Regional Office for South-East Asia, New Delhi on 3-4 October 2012. A total of 31 participants from the ministries of health, trade and, agriculture and legal offices from nine Member States as well as WHO staff from WHO country offices in Bangladesh, India, Indonesia, Myanmar and Nepal attended. Recommendations for the Member States were: (1) establishing and strengthening coordination between the ministries of health and trade on policies and regulations on trade and investment relating to tobacco and tobacco products; (2) promoting advocacy on health perspectives of international and investment agreements; (3) strengthening full implementation of the WHO FCTC; (4) mobilizing more funds for tobacco control in the Member States; (5) ensuring law enforcement and public compliance; and (6) conducting research on health cost studies and alternative livelihood for tobacco farmers. It was recommended that WHO should strengthen the capacities of Member States on health perspectives of international trade and investment agreements.

Summary

There is a fundamental and irreconcilable conflict between the interests of the tobacco industry and public health policy. On the one hand, the tobacco industry produces and promotes a product that has been scientifically proven to be highly addictive and harmful, and which exacerbates social ills, including poverty. On the other hand, governments and the public health sector try to improve the health of the population by implementing measures to reduce tobacco use. As the countries work towards developing and enforcing tobacco control measures, interference by the tobacco industry to counter these measures increases. The growing, manufacturing, distribution and selling components of the tobacco industry get involved in such interference through different means. Article 5.3 of the WHO Framework Convention on Tobacco Control and its Guidelines recommend how such interference should be addressed. Nineteen delegates from different sectors of 10 countries of the WHO South-East Asia Region attended a regional meeting on countering tobacco industry interference, from 19-21 March 2013, at the WHO Regional Office for South-East Asia, New Delhi, to analyse this issue and formulate strategies to address it. The recommendations for the Member States were to: (1) review and revise as needed, the terms of reference of the national tobacco control focal points; (2) formulate and implement, within one year, a communication strategy to raise awareness among various government and nongovernment stakeholders about tobacco industry interference and measures to counter it; (3) develop and implement a sustainable and systematic national and regional monitoring mechanism to ensure that information related to the tobacco industry is current and accurate; (4) review, and where not available, formulate a code of conduct for national officials that provides guidance on how to prevent conflicts of interest, real or perceived, between the civil service, elected officials and other national officials and the tobacco industry interests; and (5) review, and where not available, formulate rules for interaction between government and the tobacco industry, based on Guidelines for Article 5.3 of the WHO Framework Convention on Tobacco Control.


Summary

This strategy sets out the objectives and priority activities for resource mobilization for 2010-2011 to ensure effective implementation of the Strategic Action Plan for Tobacco Control in South-East Asia Region. It provides strategic approaches and guidance on the major steps for resource mobilization highlighting the process of assessment for resource requirement and the potential for raising it; analysis of donor intelligence, building alliance and carrying out advocacy. It emphasizes on the need to diversify funding sources for sustainable financing to the programme and also on the importance of realistic programme development and management of resources.
1. Tobacco use surveillance (surveys and reports)

1.1. Youth in general


**Abstract**

This study investigates socioeconomic differences in patterns and trends of tobacco consumption over time among youth in India. Additionally, the distribution of tobacco use risk factors across social class was examined. The data were derived from a longitudinal study of adolescents, Project Mobilizing Youth for Tobacco Related Initiatives. Students in eight private (high socioeconomic status [SES]; n = 2,881) and eight government (lower SES; n = 5,476) schools in two large cities in India (Delhi and Chennai) were surveyed annually about their tobacco use and related psychosocial risk factors from 2004 to 2006. Results suggest the relationship between SES and tobacco use over time was not consistent. At baseline (in 2004), lower SES was associated with higher prevalence of tobacco use but the relation between SES and tobacco use reversed 2 years later (2006). These findings were mirrored in the distribution of related psychosocial risk factors by SES at baseline (in 2004), and thereafter in 2006. Implications for prevention scientists and future intervention programs are considered.


**Abstract**

**PURPOSE:** To empirically determine the socioeconomic differences in risk profiles of susceptibility and ever use of tobacco among adolescents in India and to investigate the association between the risk profiles and the psychosocial factors for tobacco use.

**METHODS:** Students in 16 private (higher socioeconomic status [SES]; n = 4,489) and 16 government (lower SES; n = 7,153) schools in two large cities in India were surveyed about their tobacco use and related psychosocial factors in 2004. Latent class analysis was used to identify homogenous, mutually exclusive typologies existing within the data.

**RESULTS:** Overall, 3 and 4 latent classes of susceptibility and ever use of tobacco best described students in higher- and lower- SES schools, respectively. Profiles with various combinations of susceptibility and ever use of tobacco were differentially related to psychosocial factors, with lower- SES students being more vulnerable to increased levels of tobacco use than higher- SES students.

**CONCLUSIONS:** Acknowledging the multiple dimensions of tobacco use behaviors and identifying constellations of risk behaviors will enable more accurate understanding of etiological processes and will provide information for refining and targeting preventive interventions. Additionally, identifying the socioeconomic differences in susceptibility and ever use risk profiles and their psychosocial correlates will enable policy makers to address these inequities through improved allocation of resources.

An annotated bibliography of scientific studies done on tobacco topic in WHO South-East Asia Region countries


Abstract

BACKGROUND: Hookah smoking has been referred to as a global tobacco epidemic by public health officials. This study aimed to investigate the characteristics, behaviour and perceptions related to hookah smoking among the youth smokers in Pune.

METHODS: Two hundred and eighty established hookah smokers participated in this study. Data was collected using a 29-item questionnaire, constructed using three main domains: Characteristics (socio-demographic and personal), behaviour and perceptions (about harmful effects in comparison to cigarette smoking).

RESULTS: The results indicated that the mean age of starting hookah smoking was 17.3 years; 75% of participants did not have parental acceptance; light-headedness, dizziness and headache were most common reported nicotine effects, post hookah smoking. Hookah smoking on a daily basis was reported by 24.6% participants. The mean time of hookah session was 1 hour and 19 minutes. 68.2% participants were reported to smoke hookah in hookah-cafes and 35.7% participants were found to share the hookah. Some 66.7% participants had no intention to quit. Most of them (71-80%) had misperception about the safety of hookah smoking over cigarette smoking and 54-82% participants were unaware of health effects.

CONCLUSIONS: Educational intervention is urgently needed to create awareness among the youth about the harmful effects of hookah smoking.

PMID: 23991996 [PubMed - indexed for MEDLINE]


Abstract

Project Advancing Cessation of Tobacco in Vulnerable Indian Tobacco Consuming Youth (ACTIVITY) is a community-based group randomized intervention trial focused on disadvantaged youth (aged 10-19 years) residing in 14 low-income communities (slums and resettlement colonies) in Delhi, India. This article discusses the findings of Focus Group Discussions (FGDs) conducted to inform the development and test the appropriateness of Project ACTIVITY’s intervention model. The findings of the FGDs facilitated the understanding of factors contributing to increased tobacco uptake and cessation (both smoking and smokeless tobacco) among youth in this setting. Twenty-two FGDs were conducted with youth (10-19 years) and adults in two urban slums in Delhi. Key findings revealed: (i) youth and adults had limited knowledge about long-term health consequences of tobacco use; (ii) socio-environmental determinants and peer pressure were important variables influencing initiation of tobacco use; (iii) lack of motivation, support and sufficient skills hinder tobacco cessation and (iv) active involvement of community, family, religious leaders, local policy makers and health professionals is important in creating and reinforcing tobacco-free norms. The results of these FGDs aided in finalizing the intervention model for Project ACTIVITY and guided its intervention development.

PMID: 22824533 [PubMed - indexed for MEDLINE] PMCID: PMC3549588


Abstract

OBJECTIVES: To examine the longitudinal relationship between exposure and receptivity to tobacco advertisements and progression towards tobacco use among adolescents in India.
DESIGN AND SETTING: A 2-year longitudinal group-randomised trial, Mobilizing Youth for Tobacco Related Initiatives (MYTRI), was undertaken from 2004 to 2006 in 32 schools in Delhi and Chennai. Among the control schools (n=16), mixed-effects regression models were used to assess the objectives. Subjects Students who were non-suspectable, never users of tobacco (n=2782) at baseline (2004) in the control schools of Project MYTRI, who progressed academically and were followed up at endline (2006).

MAIN OUTCOME MEASURES: Progression towards tobacco use (on tobacco uptake continuum).

RESULTS: Bivariate results suggest that exposure to tobacco advertisements at baseline was associated in a dose-dependent manner with progression at endline. Students exposed at more than four places were 1.5 times (95% CI 1.12 to 1.94; p<0.05) more likely to progress towards tobacco use at endline versus those not exposed. Among boys, those exposed at more than four places were 1.7 times more likely to progress (95% CI 1.14 to 2.62; p<0.05). These significant results disappeared in multivariate analysis, when other psychosocial risk factors for tobacco use were controlled. In both bivariate and multivariate analyses, the risk of progression at endline was more than two times higher (95% CI 1.28 to 4.32; p<0.05) among boys who were highly receptive versus non-receptive boys. The same relationship did not hold among girls.

CONCLUSION: High receptivity to tobacco advertising predicts future progression to tobacco use among boys in India. Suggestive evidence exists of a causal relationship between tobacco marketing and adolescent tobacco use.

PMID: 21803927 [PubMed - indexed for MEDLINE]

Abstract

CONTEXT: Tobacco consumption initiated during the adolescent period is a major contributor to the pathogenesis of fatal diseases in adulthood. Information on tobacco use and awareness regarding tobacco legislation and hazards among adolescents in rural Kerala is limited.

AIMS: To assess the prevalence of tobacco use among adolescent students in a rural district in Kerala state and to understand the extent of awareness about the prominent legislative measures against tobacco and tobacco hazards.

MATERIALS AND METHODS: Data on awareness regarding health hazards due to tobacco use and legislation against tobacco consumption were collected from students of 15 randomly selected high schools in an educational sub-district in Kerala, using a cross-sectional study design. Chi-square and Fisher's exact test statistics were used for statistical analysis.

RESULTS: A total of 1473 students participated in the study, of which 79% were males (mean age 15.4 years, SD 1.5). The overall prevalence of 'current tobacco users' was 8%. A significant association between age and tobacco use was noted among tobacco habitués (P<0.05). Awareness regarding legislation against smoking in public places was more in the higher age-groups (P<0.05). Females were more aware of the 'smoking ban' than males (P<0.05). Our survey of the awareness regarding the hazards associated with tobacco use revealed that 41.5% of the students knew about the link between oral cancer and tobacco, with the awareness being greater among females than among males (64.3% vs 35.4%).

CONCLUSION: The finding that tobacco consumption increases with age is a matter of concern. In addition to their clinical work, dental professionals should also educate the public on the hazards of tobacco and conduct tobacco cessation programmes for adolescent groups to control the tobacco epidemic.

PMID:21891884[PubMed - indexed for MEDLINE]


Abstract

BACKGROUND: Tobacco use is a serious public health challenge in several regions of the world, including India. Increasingly, steps are being taken at policy level to curb the problem.

AIM: This study was done to find out the determinants of tobacco use so that effective intervention programs can be designed and implemented for the prevention and cessation of this growing pandemic.

METHODS: A community-based cross-sectional study was done adapting Global Youth Tobacco Survey questionnaire prepared by the Centre for Disease Control, Atlanta, among youth (15-24 years). Patterns of smoking and their determinants were calculated using univariate and multivariate analyses.

RESULTS: Prevalence of current smoking among youth was 20.4% (95% confidence interval: 16.9-23.9%). Male sex, smoking peers, cigarette advertisements, and feeling comfortable in social gatherings were significant determinants for smoking after adjusting for all explanatory variables.

CONCLUSION: Strict enforcement of regulations pertaining to cigarette advertisements in any form, enabling environment and community interventions focusing on parents and peers are required for effective control of tobacco problem among youth in India.

PMID:20622416 [PubMed - indexed for MEDLINE]

No abstract available

PMID: 20433047 [PubMed - indexed for MEDLINE] PMCID: PMC2848281


Abstract

OBJECTIVE: To provide an overview of Project ACTIVITY, a group randomized intervention trial designed to test the efficacy of a community-based, comprehensive approach to tobacco control for youth (10-19 years) living in low-income communities in India. In doing so, details regarding baseline characteristics of the study sample are provided.

METHODS: Fourteen slum communities in Delhi, India were matched and randomized to intervention (n=7) and control (n=7) conditions. The intervention included multiple strategies to promote prevention and cessation of tobacco use among youth. A census was conducted in selected blocks in all study communities (n=78,133), as well as a baseline survey of eligible youth (n=6,023). Main outcomes measures on the survey included ever use, past six months use and current use of multiple forms of tobacco. Mixed effects regression models were used to examine differences between study conditions in (a) demographic characteristics and (b) the prevalence of tobacco consumption.

RESULTS: Census data revealed that 31.9% of sampled population was in the age group of 10-19 years. No differences between study conditions in demographic characteristics (e.g. age, gender, religion, education, and occupation) among either adults or youth were noted (p>0.05). The baseline survey data revealed the prevalence of ever tobacco use among youth was 7.99%, past six months use was 5.70%, and current use was 4.88%. No differences between study conditions in these prevalence rates were observed, either (p>0.05).

CONCLUSION: The two study conditions in Project ACTIVITY are comparable. The evaluation should provide a robust test of this intervention's efficacy.

PMID: 20593929 [PubMed - indexed for MEDLINE] PMCID: PMC2898893


Abstract

BACKGROUND: Seventy per cent of premature deaths among adults are due to behavioral patterns that emerge in adolescence, including smoking.

OBJECTIVE: The objective was to study the prevalence of tobacco use among adolescent students in South Delhi and its epidemiological correlates.

MATERIALS AND METHODS: This was a cross-sectional study.

SETTING: Three schools and two colleges of South Delhi were chosen. There were 550 adolescent students aged 14-19.

STATISTICAL ANALYSIS: Statistical analysis was done using proportions, the chi-square test, and multivariate logistic regression.
RESULTS: A total of 88 (16.0%) students reported having ever tried cigarette or bidi smoking. The prevalence of current smoking was 7.1%. Exactly 10% (55) of the students reported having ever used smokeless forms of tobacco. The prevalence of tobacco use overall was found to be 20.9%, and was significantly higher (P=0.016) among the males than the females. Tobacco use was found to be significantly associated with having seen a brother/sister smoke (OR 5.15), best friend smoke (OR 2.92), and belonging to a nuclear family (OR 1.96).

CONCLUSIONS: Tobacco use is still an important risk behavior among adolescent students. This study found a strong association of tobacco use by the adolescents with their having seen various role models ever smoking.

PMID: 20922105 [PubMed] PMCID: PMC2940184


Abstract

BACKGROUND: Tobacco use imposes a huge burden of disease in India. Most studies on the use of tobacco among students in India have focused on secondary school students with a few studies investigating younger children and university students. We aimed to ascertain tobacco use among pre-university college students in Bangalore.

METHODS: A cross-sectional study was conducted among 300 students of a purposively selected boys-only, pre-university college in Bangalore. All the students from 4 of 10 randomly selected classes were enrolled in the study. An anonymous self-administered questionnaire was used to collect information on the extent and pattern of tobacco consumption, factors associated with use/non-use of tobacco products, and awareness of the harmful effects of tobacco use.

RESULTS: The prevalence of ‘ever use’ of tobacco was 15.7% (95% CI: 11.7-20.3) of which 5.3% (95% CI: 3.1-8.7) were current users of tobacco. The mean (SD) age of initiation of tobacco use was 14.7 (2.05) years; 78.3% of users were aware that tobacco was harmful. The most common reasons by ever users to start using tobacco included peer pressure, having fun/enjoyment, and curiosity. ‘Never users’ abstained from usage because of awareness of the negative health implications of tobacco use, a dislike for tobacco products, and the negative social implications of tobacco use.

CONCLUSION: Interventions need to be designed to reduce the use of tobacco among students. Such interventions should raise awareness on the social and economic implications of the use of tobacco, equip students to overcome peer influence and provide counselling to quit using tobacco.

PMID: 20384016 [PubMed - indexed for MEDLINE]


Abstract

OBJECTIVES: The objectives of the present study were to study the pattern of tobacco use among rural adolescents (15-19 years) and to find out reasons for use and nonuse of tobacco products.

MATERIALS AND METHODS: In the present community-based research, triangulation of qualitative (free list, focus group discussions) and quantitative methods (survey) was undertaken. The study was carried out in surrounding 11 villages of the Kasturba Rural Health Training Centre, Anji during January 2008 where 385 adolescents were selected by simple random sampling and interviewed by house to house visits. After survey, six focus group discussions were undertaken with adolescent boys.
RESULTS: About 68.3% boys and 12.4% girls had consumed any tobacco products in last 30 days. Out of boys who had consumed tobacco, 79.2% consumed kharrha, and 46.4% consumed gutka. Among boys, 51.2% consumed it due to peer pressure, 35.2% consumed tobacco as they felt better, and five percent consumed tobacco to ease abdominal complaints and dental problem. Among girls, 72% used dry snuff for teeth cleaning, 32% and 20% consumed tobacco in the form of gutka and tobacco & lime respectively. The reasons for nonuse of tobacco among girls were fear of cancer (59%), poor oral health (37.9%). Among non-consuming boys it was fear of cancer (58.6%), poor oral health (44.8%) and fear of getting addiction (29.3%). According to FGD respondents, few adolescent boys taste tobacco by 8-10 years of age, while girls do it by 12-13 years. Peer pressure acts as a pro tobacco influence among boys who are outgoing and spend more time with their friends. They prefer to consume freshly prepared kharra which was supposed to be less strong (tej) than gutka. Tobacco is being used in treatment of some health problems. Tobacco is chewed after meals for better digestion, given to ease toothache, pain in abdomen and to induce vomiting in suicidal insecticide poisoning.

CONCLUSION: The current consumption of any tobacco products among rural adolescents was found very high. Hence, the multi-pronged intervention strategy is needed to tackle the problem.

PMID: 19018113 [PubMed - indexed for MEDLINE]


Abstract

BACKGROUND: Smoking of cigarettes and, particularly, of "bidis" (which consist of about 0.2-0.3 gm of tobacco rolled up in the leaf of another plant (temburni) has been widespread for many decades among men in India. There have, however, been no substantial studies on the prevalence of tobacco use among youth in India. Hence a Global Youth Tobacco Survey was conducted in schools in Tamil Nadu as part of on-going Global Youth Tobacco survey in over 150 countries in the world.

METHODS: The two-stage cluster sample method was used to select 100 schools with standards 8, 9 and 10 in Tamil Nadu. The survey used self administered questionnaires, which consisted of 88 multiple choice questions.

RESULTS: A total of 4820 students participated (a response rate of 90.1%) in the 99 of 100 schools selected for the survey. About 10% of students aged 13-15 in Tamil Nadu had ever used tobacco. Significantly higher percentages of current tobacco users (one in three students) compared to never tobacco users thought smoking or chewing tobacco makes a boy or girl more attractive. About 3 in 4 current smokers expressed a wish to stop smoking and a similar proportion have already tried to quit the habit. About 80% of students considered using tobacco (smoking or chewing tobacco) to be harmful to their health. Only about half of the students reported that they have been taught in school the health effects of tobacco use during the year preceding the survey. Exposure to environmental tobacco smoke and pro-tobacco advertisements is high.

CONCLUSIONS: The tobacco prevalence among girls is alarming. The results of the survey show the need to increase awareness about health hazards of tobacco use among students. Tobacco control programs focusing on youth are essential in order to reduce the burden of tobacco related diseases in India. Repeat surveys would help in monitoring the tobacco epidemic in the school and to evaluate the efficacy of state level tobacco control programs.

PMID:15373706[PubMed - indexed for MEDLINE]

Abstract

This paper examines popular perceptions of tobacco products and describes patterns of use among college youth in Karnataka, India. Data are drawn from 25 key informant interviews and six focus groups with male and female college students, interviews with shopkeepers, observational data on youth tobacco consumption, and a college-based survey. The survey was administered to 1587 males attending eleven colleges. Forty-five percent (n = 716) of college students surveyed had used tobacco products. Thirty-six percent (n = 573) had tried cigarettes, 10% (n = 157) had tried bidis, and 18% (n = 290) had tried gutkha. Tobacco consumption among smokers was low; for daily smokers, the mean number of cigarettes smoked was 6 per day. Students attending professional colleges, including engineering, medicine, and law were significantly more likely to have ever smoked and to be daily smokers when compared to students enrolled in other courses of study. In interviews, male students noted that smoking a cigarette enhanced one's manliness, relieved boredom, and eased tension. Although female students interviewed were non-smokers, several suggested that in the future, smoking might be an acceptable behavior among college-going females. When asked about their perceptions of smoking among youth in Western countries, the majority of students believed that three-quarters of male and female youth in the West smoked. This perception has been largely formed through media images, including satellite television and films. With regard to addiction, it was widely believed that filter-tipped cigarettes were one of the most addictive products because they are made of better quality tobacco, and are milder and smoother to smoke. Therefore, a person could easily smoke more of them, which would lead to addiction. Another widely held belief was that the more expensive the cigarette, the less harmful it was for one's health.

PMID:15110430[PubMed - indexed for MEDLINE]


No abstract available

1.1.1. Global Youth Tobacco Survey (GYTS)


Abstract

BACKGROUND: At least two rounds of the Global Youth Tobacco Survey (GYTS) have been completed in most of the countries in the World Health Organization South-East Asia region. Comparing findings from these two rounds provides trend data on smokeless tobacco (SLT) use for the first time.

METHODS:

This study uses GYTS data from Bangladesh, Bhutan, India, Indonesia, Maldives, Myanmar, Nepal, Sri Lanka, Thailand, and Timor-Leste during 2006-2013. GYTS is a nationally representative survey of 13-15-year-old students using a consistent and standard protocol. Current SLT use is defined as using any kind of SLT products, such as chewing betel quid or non betel quid or snuffing any other products orally or through the nasal route, during the 30 days preceding the survey. Prevalence and 95% confidence intervals were computed using SAS/SUDAAN software.

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RESULTS: According to most recent GYTS data available in each country, the prevalence of current use of SLT among youth varied from 5.7% in Thailand to 23.2% in Bhutan; among boys, from 7.1% in Bangladesh to 27.2% in Bhutan; and among girls, from 3.7% in Bangladesh to 19.8% in Bhutan. Prevalence of SLT was reported significantly higher among boys than girls in Bhutan (boys 27.2%; girls 19.8%), India (boys 11.1%; girls 6.0%), Maldives (boys 9.2%; girls 2.9%), Myanmar (boys 15.2%; girls 4.0%), and Sri Lanka (boys 13.0%; girls 4.1%). Prevalence of current SLT use increased in Bhutan from 9.4% in 2009 to 23.2% in 2013, and in Nepal from 6.1% in 2007 to 16.2% in 2011.

CONCLUSION: The findings call for countries to implement corrective measures through strengthened policy and enforcement.

PMID: 25526249 [PubMed - in process]


No abstract available

PMID: 22628918 [PubMed] PMCID: PMC3354907


Abstract

BACKGROUND: Students aged 13–15 years in Grades 8–10 have been surveyed in the year 2006 and in 2009 to monitor the prevalences of smoking and smokeless tobacco use and to assess their attitudes, knowledge and behaviors towards tobacco use and its health impact.

METHODS: The Global Youth Tobacco Survey is a cross sectional survey that uses a two-stage cluster sample design to get a representative sample of schools and students for the study. In India, a total of 12 086 students in the year 2006 and 11 768 in 2009 were surveyed.

RESULTS: About 14% (13.7% in 2006 and 14.6% in 2009) of students use tobacco (smoking/smokeless tobacco). The prevalence of smoking among boys is about three times that of girls in both the surveys. The prevalence of smokeless tobacco among girls is twice that of smoking tobacco in both the surveys. In the 2009 survey comparing with the 2006, the percentage of students who initiated bidi smoking before 10 years of age is significantly higher in boys (2006: 26.0% and 2009:45.4%); the percentage of never smokers likely to initiate smoking in the following year is significantly lower in girls (2006: 16.0% and 2009: 10.8%); the percentage of students exposed to smoke from parents is significantly lower (2006: Boys-38.3%, Girls-30.7% and 2009: Boys:29.3%, Girls-22.4%); the percentage of students who reported that they were taught about the dangers of smoking during the school year is higher; and, ever smokers received help or advice to help stop smoking is significantly higher (2006: 19.5% and 2006: 4.4%). The percentage of students who saw any advertisements for tobacco, the percentage of students offered free cigarettes by a cigarette company representative or their access/availability to smoking tobacco and the changes observed in the prevalences of tobacco use among students in 2009 is not significantly different from 2006.

CONCLUSIONS: No significant difference is seen in the prevalence of tobacco use among students between the 2006 and 2009 surveys. The percentage of boys who initiated bidi smoking before age 10 is statistically higher in 2009 compared to 2006. There is a need to strengthen enforcement of policies already in place as well as focus on expansion into additional program efforts.

An annotated bibliography of scientific studies done on tobacco topic in WHO South-East Asia Region countries


Abstract

BACKGROUND: India made 2 important policy statements regarding tobacco control in the past decade. First, the India Tobacco Control Act (ITCA) was signed into law in 2003 with the goal to reduce tobacco consumption and protect citizens from exposure to secondhand smoke (SHS). Second, in 2005, India ratified the World Health Organization Framework Convention on Tobacco Control (WHO FCTC). During this same period, India conducted the Global Youth Tobacco Survey (GYTS) in 2003 and 2006 in an effort to track tobacco use among adolescents.

METHODS: The GYTS is a school-based survey of students aged 13-15 years. Representative national estimates for India in 2003 and 2006 were used in this study.

RESULTS: In 2006, 3.8% of students currently smoked cigarettes and 11.9% currently used other tobacco products. These rates were not significantly different than those observed in 2003. Over the same period, exposure to SHS at home and in public places significantly decreased, whereas exposure to pro-tobacco ads on billboards and the ability to purchase cigarettes in a store did not change significantly.

CONCLUSIONS: The ITCA and the WHO FCTC have had mixed impacts on the tobacco control effort for adolescents in India. The positive impacts have been the reduction in exposure to SHS, both at home and in public places. The negative impacts are seen with the lack of change in pro-tobacco advertising and ability to purchase cigarettes in stores. The Government of India needs to consider new and stronger provisions of the ITCA and include strong enforcement measures.

PMID: 18611211 [PubMed - indexed for MEDLINE]


Abstract

OBJECTIVE: To examine the relationship between tobacco advertisements, counter-advertisements, and smoking status among Indian youth.

MATERIALS AND METHODS: Global Youth Tobacco Survey (GYTS) data was used; the data encompassed a representative two-stage probability sample of 60,001 students aged 13-15 years in 24 states in India. These students were interviewed with an anonymous, self-administered questionnaire. Binary logistic regression analyses were performed with smoking status as the dependent variable, and exposure to cigarette advertisements or counter-advertisements as independent variables.

RESULTS: Students watching anti-smoking media messages were less likely to be current smokers, which was true for both boys [OR = 0.89, 95% CI (0.81-0.98)] and girls [OR = 0.79, 95% CI (0.69-0.90)]. This relationship was stronger among past smokers for boys [OR = 0.56, 95%CI (0.52-0.60)] and girls [OR = 0.49, 95% CI (0.45-0.53)]. On the other hand, students who were exposed to cigarette brand names during sports events and other televised programs, newspapers or magazines, and being offered free cigarette or cigarette-branded merchandise promotions were significantly more likely to be smokers, with effects ranging from moderate (OR=1.19) to very strong (OR=3.83).

CONCLUSIONS: This is the first attempt from India to investigate the relationship between smoking and advertising. When the data were collected, cigarette advertising was legal and highly correlated with smoking behavior. Today, indirect surrogate advertising still exists; future research should examine its effect, as it is likely
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India

to have the same impact as direct advertising on smoking behavior. Finally, counter-advertising has a protective effect on youth and may function as a cessation aid.

PMID: 19256752 [PubMed - indexed for MEDLINE]


Abstract

India ratified the WHO Framework Convention on Tobacco Control (WHO FCTC) on February 27, 2005. The WHO FCTC is the world's first public health treaty that aims to promote and protect public health and reduce the devastating health and economic impacts of tobacco. Post ratification, each member state as part of general obligation has agreed to develop, implement, periodically update and review comprehensive multisectoral national tobacco control strategies, plans and programmes in accordance with this Convention and the protocols to which it is a Party. The Global Youth Tobacco Survey (GYTS) was developed to track tobacco use among young people across countries and the GYTS surveillance system intends to enhance the capacity of countries to design, implement, and evaluate tobacco control and prevention programs. The South-East Asia Region of WHO has developed the "Regional Strategy for Utilization of the GYTS" to meet this need for countries in the Region. In 2003, India has passed its national tobacco control legislation (India Tobacco Control Act [ITCA]), which includes provisions designed to reduce tobacco consumption and protect citizens from exposure to second hand smoke. Data in the GYTS (India) report can be used as a baseline measure for future evaluation of the tobacco control programs implemented by the Ministry of Health and Family Welfare, Government of India. India has to upscale some provisions of its National Law to accommodate all of the requirements of FCTC. Using determinants measured by GYTS in India, the government can monitor the impact of enforcing various provisions of the ITCA and the progress made in achieving the goals of the WHO FCTC and the Regional Strategies. Effective enforcement of the provisions of ITCA will show in the receding numbers of tobacco use prevalence figures and reduction in the expenditures associated with tobacco use in India.

PMID: 17191409 [PubMed - indexed for MEDLINE]


PMID: 16141503 [PubMed - indexed for MEDLINE]


Abstract

The World Health Organization (WHO) attributes 4.9 million deaths annually to tobacco. That figure could reach 10 million by 2030. The Global Youth Tobacco Survey (GYTS), an international surveillance project developed jointly by WHO and the US Centers for Disease Control and Prevention (CDC), enables countries to monitor youth tobacco use and guide implementation and evaluation of tobacco prevention and control programs. The GYTS has been completed at 121 sites in 76 countries plus the Gaza Strip/West Bank, with national-level data generated in 52 countries, and city, state, or provincial/regional data generated in 24 countries. This paper reports on gender differences in tobacco use among young people in the six WHO Regions worldwide. Two unexpected findings emerged from the study. First, little difference existed between the genders in cigarette smoking or in use of other tobacco products. From 120 sites that collected data on cigarette smoking by boys and girls, more than one-half (n = 61) showed no difference by gender. For other tobacco products, 82 of 117 sites (70.1%) showed no difference by gender. Second, analysis revealed surprisingly high use of other tobacco products.
products compared to cigarette smoking. Findings suggest programs should focus broadly on all tobacco products, not just cigarettes. Also, programs need gender-sensitive components that focus on unique consequences for females, such as effects on reproduction. Lack of gender differences in the study underscores the potential growth of the tobacco epidemic, especially among women in developing countries—where most sites in this study were located.

PMID: 12899101 [PubMed - indexed for MEDLINE]

1.1.2. Global Adult Tobacco Survey (GATS)


Abstract

INTRODUCTION: Tobacco use is a leading cause of deaths and Disability Adjusted Life Years lost worldwide, particularly in South-East Asia. Health risks associated with exclusive use of one form of tobacco alone has a different health risk profile when compared to dual use. In order to tease out specific profiles of mutually exclusive categories of tobacco use, we carried out this analysis.

METHODS: The Global Adult Tobacco Survey (GATS) data was used to describe the profiles of three mutually exclusive tobacco use categories ("Current smoking only," "Current smokeless tobacco [SLT] use only," and "Dual use") in four World Health Organization South-East Asia Region countries, namely Bangladesh, India, Indonesia and Thailand. GATS was a nationally representative household-based survey that used a stratified multistage cluster sampling design proportional to population size. Prevalence of different forms of usage were described as proportions. Logistics regression analyses was performed to calculate odds ratios (OR) with 95% confidence intervals. All analyses were weighted, accounted for the complex sampling design and conducted using SPSS version 18.

RESULTS: The prevalence of different forms of tobacco use varied across countries. Current tobacco use ranged from 27.2% in Thailand to 43.3% in Bangladesh. Exclusively smoking was more common in Indonesia (34.0%) and Thailand (23.4%) and less common in Bangladesh (16.1%) and India (8.7%). Exclusively using SLT was more common in Bangladesh (20.3%) and India (20.6%) and less common on Indonesia (0.9%) and Thailand (3.5%). Dual use of smoking and SLT was found in Bangladesh (6.8%) and India (5.3%), but was negligible in Indonesia (0.8) and Thailand (0.4%). Gender, age, education and wealth had significant effects on the OR for most forms of tobacco use across all four countries with the exceptions of SLT use in Indonesia and dual use in both Indonesia and Thailand. In general, the different forms of tobacco use increased among males and with increasing age, and decreased with higher education and wealth. The results for urban versus rural residence were mixed and frequently not significant once controlling for the other demographic factors.

CONCLUSION: This study addressed the socioeconomic disparities, which underlie health inequities due to tobacco use. Tobacco control activities in these countries should take in account local cultural, social and demographic factors for successful implementation.

PMID: 25526244 [PubMed - in process]


Abstract

BACKGROUND: Tobacco use in India is characterized by a high prevalence of smoking and smokeless tobacco use, with dual use also contributing a noticeable proportion. In the context of such a high burden of tobacco use, this study examines the regional variations, and socioeconomic, demographic and other correlates of smoking, smokeless tobacco and dual use of tobacco in India.

METHODS AND FINDINGS: We analyzed a cross sectional, nationally representative sample of individuals from the Global Adult Tobacco Survey in India (2009-10), which covered 69,296 individuals aged 15 years and above.
The current tobacco use in three forms, namely, smoking only, smokeless tobacco use only, and both smoking and smokeless tobacco use were considered as outcomes in this study. Descriptive statistics, cross tabulations and multinomial logistic regression analysis were adopted as analytical tools. Smokeless tobacco use was the major form of tobacco use in India followed by smoking and dual tobacco use. Tobacco use was higher among males, the less educated, the poor, and the rural population in India. Respondents lacking knowledge of health hazards of tobacco had higher prevalence of tobacco use in each form. The prevalence of different forms of tobacco use varies significantly by states. The prevalence of tobacco use increases concomitantly with age among females. Middle-aged adult males had higher prevalence of tobacco use. Age, education and region were found to be significant determinants of all forms of tobacco use. Adults from the poor household had significantly higher risk of consuming smokeless tobacco. Lack of awareness about the selected hazards of tobacco significantly affects tobacco use.

CONCLUSIONS: There is an urgent need to curb the use of tobacco among the sub-groups of population with higher prevalence. Tobacco control policies in India should adopt a targeted, population-based approach to control and reduce tobacco consumption in the country.

PMID: 25474196 [PubMed - in process] PMCID: PMC4256395


OBJECTIVES: This study had twin objectives of assessing the oral health knowledge, attitude and practices and to assess the dental caries status and treatment needs among the orphan children of orphanages of Jodhpur city, Rajasthan, India.

MATERIALS AND METHODS: This cross-sectional study was carried out on 100 children to assess the oral health knowledge, attitude and practices of children and adolescents of orphanages in Jodhpur city, Rajasthan, India. The data was collected on a pre-tested questionnaire which included 20 closed ended multiple-choice questions on perceived oral health status, knowledge of oral health and attitude, oral health practices, dietary habits and behaviour towards dental treatment. On completion of the questionnaire, each child underwent an oral examination and Dentition status and treatment needs index (WHO Oral Health Surveys-1997) was recorded for each subject.

RESULTS: Almost 93% of the children felt the necessity of maintaining oral hygiene. There were 69% of the children who believed that it was necessary to brush teeth after every meal, 51% children believed that regular tooth-brushing prevents all tooth problems and 93% children knew that tobacco is carcinogenic in nature. Also, it was found that 77% of the children believed that regular dental visits help in maintaining oral hygiene.

CONCLUSION: Many of them had acquired knowledge on oral health. More than half of the study subjects were aware of the importance of keeping good oral hygiene, regular dental visits and harmful effects of tobacco.

PMID: 25478441 [PubMed] PMCID: PMC4253259


Abstract

OBJECTIVE: Evidence shows that smoking tobacco using a waterpipe is significantly associated with diseases. Despite this, waterpipe use seems to be increasing worldwide, though nationally representative data are not widely available. The Global Adult Tobacco Survey (GATS) provides an opportunity to measure various indicators of waterpipe use from nationally representative surveys.

METHODS: Data were obtained for adults 15 years of age or older from 13 countries (Bangladesh, Brazil, China, Egypt, India, Mexico, Philippines, Russia, Thailand, Turkey, Ukraine, Uruguay and Vietnam) who completed GATS from 2008-2010. The GATS questionnaire collected data on current waterpipe use, including daily/less
RESULTS: GATS was successful in producing nationally representative data on waterpipe use from 13 countries, many of which for the first time. The prevalence of waterpipe use among men was highest in Vietnam (13.0%) and Egypt (6.2%); among women, waterpipe use was highest in Russia (3.2%) and Ukraine (1.1%). While over 90% of adults in Ukraine thought smoking tobacco causes serious illness, only 31.4% thought smoking tobacco using a waterpipe causes serious illness.

CONCLUSIONS: GATS data provide the ability to analyse waterpipe use within a country and across countries. Monitoring of waterpipe use at a national level will better enable countries to target tobacco control interventions such as education campaigns about the negative health effects of waterpipe use.

PMID: 23760609 [PubMed - in process] PMCID: PMC4145417

INTRODUCTION: Waterpipe tobacco smoking is receiving growing attention due to accumulating evidence suggesting increasing prevalence in some populations and deleterious health effects. Nevertheless, the relationship between waterpipe and cigarette smoking remain unknown, particularly in low and middle income countries.

MATERIALS AND METHODS: We analysed waterpipe and cigarette smoking using data from Global Adult Tobacco Survey, a household survey of adults aged ≥15 years conducted between 2008-2010 in LMICs. Factors associated with waterpipe and cigarette use were assessed using multiple logistic regression. Factors associated with the quantity of waterpipe and cigarette smoking were assessed using log-linear regression models.

RESULTS: After adjusting for age, gender, residence, education, occupation and smokeless tobacco use, waterpipe smoking was significantly higher among cigarette users than in non-cigarette users in India (5.6% vs. 0.6%, AOR 13.12, 95% CI 7.41-23.23) and Russia (6.7% vs. 0.2%, AOR 27.73, 95% CI 11.41-67.43), but inversely associated in Egypt (2.6% vs. 3.4%, AOR 0.21, 95% CI 0.15-0.30) and not associated in Vietnam (13.3% vs. 4.7%, AOR 0.96, 95% CI 0.74-1.23). Compared to non-cigarette smokers, waterpipe smokers who also used cigarettes had more waterpipe smoking sessions per week in Russia (1.3 vs. 2.9, beta coefficient 0.31, 95% CI 0.06, 0.57), but less in Egypt (18.2 vs. 10.7, beta coefficient -0.45, 95% CI -0.73, -0.17) and Vietnam (102.0 vs. 79.3, beta coefficient -0.31, 95% CI -0.56, -0.06) and similar amounts in India (29.4 vs. 32.6, beta coefficient -0.12, 95% CI -0.46, 0.22).

CONCLUSIONS: Waterpipe smoking is low in most LMICs but important country-level differences in use, including concurrent cigarette smoking, should be taken into account when designing and evaluating tobacco control interventions.

PMID: 24664109 [PubMed - indexed for MEDLINE] PMCID: PMC3963998

Background: Tobacco use and quit attempts are two key indicators of the Global Adult Tobacco Survey (GATS) that assess quit attempts among current as well as former tobacco users. The relevant data have inherent policy implications for tobacco cessation programme evaluation. This study aimed to review the concepts of quit attempt assessment and quantifying invalid responses considering GATS-India data.

Materials and methods: GATS assessment of tobacco use and quit attempts were examined in the current literature. Two categories of invalid responses were identified by stratified analysis of the duration of last quit
attempt among current users and duration of abstinence among former users. Category A included absolute invalid responses when time-frame of assessment of current tobacco use and less than former tobacco use were violated. Category B included responses that violated the unit of measurement of time.

**Results:** Current daily use, current less than daily use and former use in GATS were imprecisely defined with overlapping of time-frame of assessment. Overall responses of 3,102 current smokers, 4,036 current smokeless users, 1,904 former smokers and 1,343 former smokeless users were analyzed to quantify invalid responses. Analysis indicated overall 21.2% (category A: 7.32%; category B: 17.7%) and 22.7% (category A: 8.65%; category B: 18.1%) invalid responses among current smokers and smokeless users respectively regarding their duration of last quit attempt. Similarly overall 6.62% (category A: 4.7%; category B: 2.3%) and 10.6% (category A: 8.6%; category B: 3.6%) invalid responses were identified among former smokers and smokeless users respectively regarding their duration of abstinence.

**Conclusions:** High invalid responses for a single assessment are due to the imprecise definition of current use, former use and quit attempt; and failure to utilize opportunity of direct data entry interface use during the survey to validate responses instantly. Redefining tobacco use and quit attempts considering an appropriate timeframe would reduce invalid responses.

PMID: 24377568 [PubMed - in process]

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**Abstract**

In 2008, the Centers for Disease Control and Prevention (CDC) and the World Health Organization developed the Global Adult Tobacco Survey (GATS), an instrument to monitor global tobacco use and measure indicators of tobacco control. GATS, a nationally representative household survey of persons aged 15 years or older, was conducted for the first time during 2008-2010 in 14 low- and middle-income countries In each country, GATS used a standard core questionnaire, sample design, and procedures for data collection and management and, as needed, added country-specific questions that were reviewed and approved by international experts. The core questionnaire included questions about various characteristics of the respondents, their tobacco use (smoking and smokeless), and a wide range of tobacco-related topics (cessation; secondhand smoke; economics; media; and knowledge, attitudes, and perceptions). In each country, a multistage cluster sample design was used, with households selected proportionate to the size of the population. Households were chosen randomly within a primary or secondary sampling unit, and one respondent was selected at random from each household to participate in the survey. Interviewers administered the survey in the country's local language(s) using handheld electronic data collection devices. Interviews were conducted privately, and same-sex interviewers were used in countries where mixed-sex interviews would be culturally inappropriate. All 14 countries completed the survey during 2008-2010. In each country, the ministry of health was the lead coordinating agency for GATS, and the survey was implemented by national statistical organizations or surveillance institutes. This article describes the background and rationale for GATS and includes a comprehensive description of the survey methods and protocol.

PMID: 24042975 [PubMed - as supplied by publisher]

(.SEAR country not mentioned and full text not accessible).


**Abstract**

**BACKGROUND:** Nearly 275 million adults (15 years and above) use tobacco in India, which contributes substantially to potentially preventable morbidity and mortality. There is good evidence from developed country settings that use of tobacco cessation services influences intention to quit, with a higher proportion of attempts being successful in fully quitting. There is little evidence about cessation and quitting behaviour in the Indian
context. This study assesses the socio-demographic characteristics and cessation services used by adults i) who attempted to quit smoked and smokeless tobacco and ii) who were successful in quitting.

METHODS: The study was a cross-sectional secondary data analysis of the Global Adult Tobacco Survey, India, 2009-10. There were 25,175 ever tobacco users aged 21 years and above included in the study. Bivariate and multivariate logistic regression analysis was done to determine associations between socio-demographic variables and cessation services utilized with attempts to quit tobacco and successful quitting.

RESULTS: Of the ever tobacco users, 10,513 (42%) made an attempt to quit tobacco, and of these 4,395 (42%) were successful. Significant associations were demonstrated between male gender, increasing educational attainment and higher asset quintiles for both those who attempted to quit and those who were successful. Younger age groups had higher odds of quit attempts than all except the oldest age group, but also had the lowest odds of successful quitting. Health care provider advice was positively associated with attempts to quit, but both advice and use of cessation aids were not associated with successful quitting.

CONCLUSIONS: This study provides the first national evidence on the relationships between quitting attempts and successful quitting with socio-demographic characteristics, health care provider advice and use of cessation services. The findings of the study have important implications for scaling up tobacco cessation services in India, and indicate a need to re-examine in greater detail the effects of socio-demographic factors, type of tobacco product used and levels of dependency on quitting. Health system factors such as coverage and accessibility of cessation services, type of service, and its duration and follow up also have to be examined in detail to ascertain effects on quitting behavior.

PMID: 23521839 [PubMed - indexed for MEDLINE] PMCID: PMC3614880


Abstract

BACKGROUND: The Global Adult Tobacco Survey (GATS) was carried out for systematically monitoring tobacco use and for tracking key tobacco control indicators.

MATERIALS AND METHODS: A total of 70,802 households, including 42,647 in rural areas and 28,155 in urban areas, were covered with a three stage sampling design. Data were collected on sociodemographic characteristics, knowledge, attitude and practices of tobacco consumption.

RESULTS: GATS-India highlighted that total tobacco use among its residents is overall 34.6%, varying for males (47.9%) and females (20.7%). The rural areas of the country exhibit comparatively higher prevalence rates (38.4%) in comparison to urban areas (25.3%). Overall, Khaini, a smokeless tobacco product (12.0%), is the most popular form of tobacco use among males and females, followed by bidi smoking (9.0%).

CONCLUSION: Results of GATS data can be used as baseline for evaluation of new tobacco control approaches in India integrating culturally acceptable and cost effective measures.

PMID: 23803124 [PubMed - indexed for MEDLINE]


Abstract

BACKGROUND: The Global Adult Tobacco Survey has 15 key indicators, cigarettes smoked per day (CPD) among daily smokers being one of them. The first wave of GATS in 14 countries indicated that mean CPD use is higher in women than men in India only, which is contrary to the current understanding of tobacco use globally. This study was undertaken to understand the unusual findings for mean CPD use in the GATS-India survey.
MATERIALS AND METHODS: Items B06a and B06b of the GATS India survey questionnaire that collected information on daily consumption of manufactured and rolled cigarettes were analyzed using SPSS software. Exclusive users were identified from these items after excluding the concurrent users of other tobacco products. Cigarette type, exclusive use and gender stratified analyses were made. Consumption of different types of cigarettes among the mixed users of manufactured and rolled cigarettes were correlated.

RESULTS: Higher mean number of CPD use among male daily-smokers was observed than their female counterparts in product specific analysis. Mean CPD as per GATS cigarette definition was higher in males than females for exclusive users but a reverse trend was observed in case of non-exclusive users. Use of manufactured cigarettes increased with increase in use of rolled cigarette among the mixed users and around half of these users reported equal CPD frequency for the both types of cigarettes.

CONCLUSIONS: The anomaly in mean CPD estimate in GATS-India data was due to inclusion of two heterogeneous products to define cigarettes, variation in cigarette product specific user proportions contributing to the average and non-exclusive concurrent use of other tobacco products. The consumption pattern of cigarettes among the mixed users highlights bias in CPD reporting. Definition, analysis and interpretation of ‘cigarettes per day’ in the GATS India survey need to be improved by redefining cigarettes and making product specific analyses.

PMID: 23803119 [PubMed - indexed for MEDLINE]


Abstract

BACKGROUND: Hardcore smoking is represented by a subset of daily smokers with high nicotine dependence, inability to quit and unwillingness to quit. Estimating the related burden could help us in identifying a high risk population prone to tobacco induced diseases and improve cessation planning for them. This study assessed the prevalence and associated factors of hardcore smoking in three South-East Asian countries and discussed its implication for smoking cessation intervention in this region.

MATERIALS AND METHODS: Global Adult Tobacco Survey (GATS) data of India, Bangladesh and Thailand were analyzed to quantify the hardcore smoking prevalence in the region. On the basis of review, an operational definition of hardcore smoking was adopted that includes (1) current daily smoker, (2) no quit attempt in the past 12 months of survey or last quit attempt of less than 24 hours duration, (3) no intention to quit in next 12 months or not interested in quitting, (4) time to first smoke within 30 minutes of waking up, and (5) knowledge of smoking hazards. Logistic regression analysis was carried out using hardcore smoking status as response variable and gender, type of residence, occupation, education, wealth index and age-group as possible predictors.

RESULTS: There were 31.3 million hardcore smokers in the three Asian countries. The adult prevalence of hardcore smoking in these countries ranges between 3.1% in India to 6% in Thailand. These hardcore smokers constitute 18.3-29.7% of daily smokers. The logistic regression model indicated that age, gender, occupation and wealth index are the major predictors of hardcore smoking with varied influence across countries.

CONCLUSIONS: Presence of a higher number of hardcore smoking populations in Asia is a major public health challenge for tobacco control and cancer prevention. There is need of intensive cessation interventions with due consideration of contextual predictors.

PMID: 23621209 [PubMed - indexed for MEDLINE]

Abstract

OBJECTIVE: Exposure to secondhand smoke (SHS) from burning tobacco products causes disease and premature death among non-smoking adults and children. The objective of this study was to determine the nature, extent and demographic correlates of SHS exposure among adults in low- and middle-income countries with a high burden of tobacco use.

METHODS: Data were obtained from the Global Adult Tobacco Survey (GATS), a nationally representative household survey of individuals 15 years of age or older. Interviews were conducted during 2008-2010 in Bangladesh, Brazil, China, Egypt, India, Mexico, the Philippines, Poland, Russia, Thailand, Turkey, Ukraine, Uruguay and Vietnam. Descriptive statistics were used to determine the prevalence and correlates of SHS exposure in homes, workplaces, government buildings, restaurants, public transportation and healthcare facilities.

RESULTS: Exposure to SHS in the home ranged from 17.3% (Mexico) to 73.1% (Vietnam). Among those who work in an indoor area outside the home, SHS exposure in the workplace ranged from 16.5% (Uruguay) to 63.3% (China). Exposure to SHS ranged from 6.9% (Uruguay) to 72.7% (Egypt) in government buildings, 4.4% (Uruguay) to 88.5% (China) in restaurants, 5.4% (Uruguay) to 79.6% (Egypt) on public transportation, and 3.8% (Uruguay) to 49.2% (Egypt) in healthcare facilities.

CONCLUSIONS: A large proportion of adults living in low- and middle-income countries are exposed to SHS in their homes, workplaces, and other public places. Countries can enact and enforce legislation requiring 100% smoke-free public places and workplaces, and can also conduct educational initiatives to reduce SHS exposure in homes.

PMID: 23019273 [PubMed - indexed for MEDLINE]


Abstract

INTRODUCTION: Individuals who use both smoked and smokeless tobacco products (dual tobacco users) form a special group about which little is known. This group is especially relevant to India, where smokeless tobacco use is very common. The aim of this study was to characterise the profile of dual users, study their pattern of initiation to the second product, their attitudes toward quitting as well as their cessation profile.

METHODS AND MATERIALS: The GATS dataset for India was analyzed using SPSS;

RESULTS: In India, dual tobacco users (42.3 million; 5.3% of all adults; 15.4% of all tobacco users) have a profile similar to that of smokers. Some 52.6% of dual users started both practices within 2 years. The most prevalent product combination was bidi-khaini (1.79%) followed by bidi-gutka (1.50%), cigarette-khaini (1.28%), and cigarette-gutka (1.22%). Among daily users, the correlation between the daily frequencies of the use of each product was very high for most product combinations. While 36.7% of dual users were interested in quitting, only 5.0% of dual users could do so. The prevalence of ex-dual users was 0.4%.

CONCLUSION: Dual users constitute a large, high-risk group that requires special attention.

PMID: 23442404 [PubMed - indexed for MEDLINE]

Abstract

BACKGROUND: Tobacco use has been identified as the single biggest cause of inequality in morbidity. The objective of this study is to examine the role of social determinants on current tobacco use in thirteen low- and middle-income countries.

METHODOLOGY/PRINCIPAL FINDINGS: We used nationally representative data from the Global Adult Tobacco Survey (GATS) conducted during 2008-2010 in 13 low- and middle-income countries: Bangladesh, China, Egypt, India, Mexico, Philippines, Poland, Russian Federation, Thailand, Turkey, Ukraine, Uruguay, and Viet Nam. These surveys provided information on 209,027 respondents aged 15 years and above and the country datasets were analyzed individually for estimating current tobacco use across various socio-demographic factors (gender, age, place of residence, education, wealth index, and knowledge on harmful effects of smoking). Multiple logistic regression analysis was used to predict the impact of these determinants on current tobacco use status. Current tobacco use was defined as current smoking or use of smokeless tobacco, either daily or occasionally. Former smokers were excluded from the analysis. Adjusted odds ratios for current tobacco use after controlling other cofactors, was significantly higher for males across all countries and for urban areas in eight of the 13 countries. For educational level, the trend was significant in Bangladesh, Egypt, India, Philippines and Thailand demonstrating decreasing prevalence of tobacco use with increasing levels of education. For wealth index, the trend of decreasing prevalence of tobacco use with increasing wealth was significant for Bangladesh, India, Philippines, Thailand, Turkey, Ukraine, Uruguay and Viet Nam. The trend of decreasing prevalence with increasing levels of knowledge on harmful effects of smoking was significant in China, India, Philippines, Poland, Russian Federation, Thailand, Ukraine and Viet Nam.

CONCLUSIONS/SIGNIFICANCE: These findings demonstrate a significant but varied role of social determinants on current tobacco use within and across countries.

PMID: 22438937 [PubMed - indexed for MEDLINE] PMCID: PMC3306395


Abstract

BACKGROUND: Despite the high global burden of diseases caused by tobacco, valid and comparable prevalence data for patterns of adult tobacco use and factors influencing use are absent for many low-income and middle-income countries. We assess these patterns through analysis of data from the Global Adult Tobacco Survey (GATS).

METHODS: Between Oct 1, 2008, and March 15, 2010, GATS used nationally representative household surveys with comparable methods to obtain relevant information from individuals aged 15 years or older in 14 low-income and middle-income countries (Bangladesh, Brazil, China, Egypt, India, Mexico, Philippines, Poland, Russia, Thailand, Turkey, Ukraine, Uruguay, and Vietnam). We compared weighted point estimates and 95% CIs of tobacco use between these 14 countries and with data from the 2008 UK General Lifestyle Survey and the 2006-07 US Tobacco Use Supplement to the Current Population Survey. All these surveys had cross-sectional study designs.

FINDINGS: In countries participating in GATS, 48.6% (95% CI 47.6-49.6) of men and 11.3% (10.7-12.0) of women were tobacco users. 40.7% of men (ranging from 21.6% in Brazil to 60.2% in Russia) and 5.0% of women (0.5% in Egypt to 24.4% in Poland) in GATS countries smoked a tobacco product. Manufactured cigarettes were favoured by most smokers (82%) overall, but smokeless tobacco and bids were commonly used in India and Bangladesh. For individuals who had ever smoked daily, women aged 55-64 years at the time of the survey began smoking at an older age than did equivalently aged men in most GATS countries. However, those individuals who had ever smoked daily and were aged 25-34 years when surveyed started to do so at much the same age in both sexes. Quit ratios were very low (<20% overall) in China, India, Russia, Egypt, and Bangladesh.

INTERPRETATION: The first wave of GATS showed high rates of smoking in men, early initiation of smoking in women, and low quit ratios, reinforcing the view that efforts to prevent initiation and promote cessation of tobacco use are needed to reduce associated morbidity and mortality.

An annotated bibliography of scientific studies done on tobacco topic in WHO South-East Asia Region countries

Abstract:
Background: Tobacco use is one of the major preventable causes of premature death and disease in the world. Many psychosocial factors were found to influence tobacco use. Therefore the present study was designed to determine the role of psychosocial factors associated with tobacco use among school going adolescents in Delhi, India. Methods. Cross-sectional study was conducted from February 2013 to September 2013 in four government schools in South district of Delhi, India. The questionnaire contains questions adapted from GYTS (Global Youth Tobacco Survey) to find the prevalence and pattern of tobacco use among adolescents. Data were analyzed using SPSS version 21. Results. The prevalence of ever and current tobacco use was found in 16.4% and 13.1%. Current smoking and current tobacco chewing were found in 10.2% and 9.4% students, respectively. The risk of current tobacco use was found to be higher among males (P value = 0.000) and in those who got higher pocket money (P value = 0.000). Psychosocial factors like lower general self-efficacy and maladjustments with peers, teachers, and schools were also found to be significant predictors of current tobacco use. Conclusion. The study has revealed higher prevalence of ever and current tobacco use among adolescent students in Delhi, India.

PMID: 25431738 [PubMed] PMCID: PMC4241244


Abstract

BACKGROUND: Cigarettes smoking is a common mode of consuming tobacco in India. This habit usually starts in adolescence and tracks across the life course. Interventions like building decision making skills and resisting negative influences are effective in reducing the initiation and level of tobacco use.

AIMS AND OBJECTIVES: The purpose of this study was to assess the prevalence of adolescent current cigarette smoking behavior and to investigate the individual and social factors, which influence them both to and not to smoke.

METHODOLOGY: A cross-sectional study was carried out among school going adolescents in Shimla town of North India. After obtaining their written informed consent, a questionnaire was administered.

RESULTS: The overall prevalence of current cigarette smoking was 11.8%. The binary logistic regression model revealed that parents' and peers' smoking behavior influence adolescent smoking behavior. Individual self-harm tendency also significantly predicted cigarette smoking behavior. Parental active participation in keeping a track of their children's free time activities predicted to protect adolescents from taking this habit.

CONCLUSION: Our research lends support to the need for intervention on restricting adolescents from taking up this habit and becoming another tobacco industries’ addicted customer. Parents who smoke should quit this habit, which will not only restore their own health, but also protect their children. All parents should be counseled to carefully observe their children’s free time activities.

PMID: 25422801 [PubMed] PMCID: PMC4236693

Abstract

CONTEXT: Use of hookah is on the rise among youngsters. A growing body of evidence suggests that these children are experimenting with this form of tobacco.

AIMS: The study was carried out to know prevalence estimates of hookah use and factors associated with it among high school students.

SETTINGS AND DESIGN: This study adds to the current literature by providing prevalence estimates and factors associated with hookah use among high school students of Indore - a city in central India.

MATERIALS AND METHODS: A cross-sectional survey of 1000 students from high schools was conducted to find hookah users and factors associated with its use.

RESULTS: Hookah users in this study population were 7.6%. Most of them first learned about hookah from friends (63.2%). They usually smoked in hookah lounges (85.5%). These children believed that hookah was safer and more socially acceptable than cigarettes.

CONCLUSIONS: Misperceptions of safety and popularity of hookah among the younger generation are cause for concern. Presence of hookah lounges should be a target for further regulation. Prevention activities are necessary to prevent this rising public health concern.

PMID: 24021329 [PubMed - in process]


Abstract

Adolescents are vulnerable targets of tobacco industry with all consequences of usage. Studies reveal that tobacco abuse is rising in this age group in India. A cross sectional survey was carried out in two coeducational high schools of Anandanagar village of Singur block, Hooghly district, West Bengal among 276 students of VIII-IX standard to study the knowledge and abuse of tobacco and to find out influencing socio-demographic factors. Knowledge score was higher in females, students from nuclear families, and those with literate parents. Low prevalence of tobacco intake was obtained among the students, with 9.8% reported having ever used smokeless tobacco and 4.3% ever smoked. Tobacco intake was higher among those with a history of parental tobacco intake. Continued information education and communication (IEC) activities should be conducted by the school authorities, with involvement of nongovernment organizations (NGOs) and parents for primary prevention.

PMID: 23354139 [PubMed - indexed for MEDLINE]


Abstract

BACKGROUND: While no level of exposure to Second-hand smoke (SHS) is free of risk, 37% of students from South-East Asia region were exposed to SHS.

AIMS: To estimate the prevalence of exposure to SHS and identify predictors of exposure to SHS at home and outside the home among 1,511 school students aged 11-17 years.
SETTING: The City of Mumbai.

STUDY DESIGN: This study used a two-stage cluster sampling design.

MATERIALS AND METHODS: Mumbai Student Tobacco Survey (MSTS) was a cross-sectional study, using anonymous self-administered structured questionnaire among students. The probability of schools being selected was proportional to the enrolment into grades 8 to 10. The study aimed to sample around 60 students from selected classes in each chosen school.

STATISTICAL ANALYSIS:

Proportions, 95% confidence interval and adjusted odds ratios (AOR) were used.

RESULTS: About 79.9% students were aware about the current smoking ban at public places and 88.1% were knowledgeable about the deleterious influence of SHS on them. Overall, 16.5% of students were exposed to SHS at home, and 39.9% outside of the home. Students from families where at least one parent used tobacco were at the greatest risk of SHS exposure at home in addition to outside the home exposure. Those students who were not aware about the smoking ban in public places were at a significantly higher risk of SHS exposure outside the home.

CONCLUSION: Self-reported tobacco use status, age, parents’ tobacco use, close friends’ smoking, and the route they take to school were significant determinants of exposure to SHS at home and outside the home.

PMID: 23442407 [PubMed - indexed for MEDLINE]


Abstract

This article presents the results of a mediation analysis of Project MYTRI (Mobilizing Youth for Tobacco Related Initiatives in India), a randomized, controlled trial of a multiple-component, school-based tobacco prevention program for sixth- to ninth-graders (n = 14,085) in Delhi and Chennai, India. A mediation analysis identifies how an intervention achieves its effects. In MYTRI, changes in students’ (a) knowledge about the negative health effects of tobacco, (b) beliefs about its social consequences, (c) reasons to use tobacco, (d) reasons not to use tobacco, (e) advocacy skills self-efficacy, and (f) normative beliefs about tobacco use were significantly associated with reductions in students' intentions to use tobacco and tobacco use behaviors. In contrast, changes in students' perceptions of the prevalence of smoking and chewing tobacco were significantly related to increases in students' intentions to use and use of tobacco. Implications for intervention design are considered.

PMID: 21411716 [PubMed - indexed for MEDLINE] PMCID: PMC3096703


Abstract

BACKGROUND: More than one-third of the tobacco consumed regionally is of smokeless form.

AIMS: To determine the prevalence and pattern of smokeless tobacco use among school children.

SETTINGS AND DESIGN: This cross-sectional study was conducted among children in 5 randomly selected high schools in Kannur district, Kerala, India.
MATERIALS AND METHODS: This cross-sectional study was conducted among 1200 children. A self-administered questionnaire was used for data collection.

STATISTICAL ANALYSIS: PASW 17 software was used for data analysis.

RESULTS: The mean age of the students was 14.4 years with a standard deviation (SD) of 1.2 years, and 8.5% (CI, 7.1-10.2) of the participants were tobacco users. Smokeless tobacco was used by 2% (CI, 1.2-3.4) of the participants. None of the female students used tobacco products. Among the tobacco users, the mean age at the start of any tobacco use was 12.8 years with an SD of 1.1 years. The minimum age was 12 years and the maximum was 14 years. More than 50% smokeless tobacco users started their habit at the age of 12 years; 38.5% of them started at the age of 13 years and remaining at the age of 14 years. The 84.6% smokeless tobacco users were using it 2-3 times a week and 39% of them revealed that the tobacco products were purchased from shops located near the schools. Among the users, one used to keep the quid in the mouth for more than half an hour.

CONCLUSION: The study concludes that there is a need to educate the children regarding the hazards associated with tobacco consumption.

PMID:20622409 [PubMed - indexed for MEDLINE]


Abstract

In India, 57% of men between 15 and 54 years and 10.8% of women between 15 and 49 years use tobacco. A wide variety of tobacco gets used and the poor and the underprivileged are the dominant victims of tobacco and its adverse consequences. Project MYTRI (Mobilizing Youth for Tobacco-Related Initiatives in India) was a tobacco prevention intervention program, a cluster-randomized trial in 32 Indian schools which aimed to decrease susceptibility to tobacco use among sixth- to ninth-grade students in urban settings in India. This culture-specific intervention, which addressed both smokeless and smoked forms of tobacco, was Indian in content and communication. We qualitatively developed indicators which would help accurately measure the dose of the intervention given, received and reached. A multi-staged process evaluation was done through both subjective and objective measures. Training the teachers critically contributed toward a rigorous implementation and also correlated with the outcomes, as did a higher proportion of students participating in the classroom discussions and better peer-leader-student communication. A sizeable proportion of subjective responses were 'socially desirable', making objective assessment a preferred methodology even for 'dose received'. The peer-led health activism was successful. Teachers' manuals need to be concise.

PMID: 20884731 [PubMed - indexed for MEDLINE] PMCID: PMC3003490


Abstract

BACKGROUND: Not much is known about the academic correlates of tobacco use among students in developing countries. This study investigated associations between multiple forms of tobacco use, psychosocial risk factors, and academic failure among 10- to 16-year-old government school students in Delhi and Chennai, India.

METHODS: This study was a secondary analysis of data gathered from students in 7 government schools during a larger tobacco intervention trial in India. Mixed-effects regression analyses were carried out on a cross-sectional sample of 3798 students and a retrospective cohort of 2586 students. Data on tobacco use and risk...
factors were collected from self-reported student surveys in 2006 and 2004. Using school records, academic failure was defined as repeating the same grade level once or twice between 2004 and 2006.

RESULTS: In 2006, academic failure was significantly more prevalent among students who reported use of chewing tobacco, bidis, or cigarettes, as compared with nonusers. Students with academic failure had greater social susceptibility and intentions for future tobacco use, and poor knowledge and self-efficacy for avoiding tobacco. Cohort analyses showed that students who had reported tobacco use in 2004 were more likely to have academic failure by 2006, as compared with nonusers.

CONCLUSIONS:

School health programs that incorporate tobacco control measures should be offered to government school students with poor academic outcomes in India, along with remedial education efforts. School-based longitudinal research is needed to assess effects of tobacco use in early adolescence on academic, social, and behavioral outcomes in later adolescence and young adulthood.

PMID: 21039554 [PubMed - indexed for MEDLINE]

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Abstract

Few studies have explored the relationship between acculturation and health in non-immigrant populations. The purpose of this study was to investigate the relationship between "westernization" and tobacco use among adolescents living in Delhi, India. A bi-dimensional model of acculturation was adapted for use in this study to examine (a) whether young people's identification with Western culture in this setting is related to tobacco use, and (b) whether their maintenance of more traditional Indian ways of living is related to tobacco use. Multiple types of tobacco commonly used in India (e.g., cigarettes, bidis, chewing tobacco) were considered. Socioeconomic status (SES), gender, and grade level were examined as potential effect modifiers of the relationship between "westernization" and tobacco use. The study was cross-sectional by design and included 3512 students in eighth and tenth grades who were enrolled in 14 Private (higher SES) and Government (lower SES) schools in Delhi, India. A self-report survey was used to collect information on tobacco use and "westernization." The results suggest that young people's identification with Western influences may increase their risk for tobacco use, while their maintenance of traditional Indian ways of living confers some protection. Importantly, these effects were independent of one another. Boys benefitted more from protective effects than girls, and tenth graders gained more consistent benefits than eighth graders in this regard, too. Negative effects associated with identification with Western ways of living were, in contrast, consistent across gender and grade level. The positive and negative effects of acculturation on adolescent tobacco use held for all tobacco products considered here. Future interventions designed to curb youth tobacco use in India may benefit by paying closer attention to cultural preferences of these young consumers.

PMID: 20598413 [PubMed - indexed for MEDLINE] PMCID: PMC2910122

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Abstract

BACKGROUND: The current study entailed a survey of children from the lower socioeconomic strata of rural and urban regions of the states of Maharashtra and Assam who are vulnerable to tobacco usage. More than 1700 children were checked for precancerous lesions and 1004 were surveyed for tobacco habits and awareness.
AIMS: The objective of the survey was to determine and report on all the variant factors affecting the use of tobacco among the underprivileged children population. The aim of the clinical check-up was to detect precancerous lesions in the tobacco-using children at an early treatable stage.

MATERIALS AND METHODS: Awareness lectures and ENT camps were conducted at 12 organizations/community centers. A cross-section of children were interviewed to understand tobacco use among them. All the children were screened for precancerous lesions. Children with suspicious oral lesions were sent for further evaluation at a nearby diagnostic cancer facility. The survey was conducted by trained social workers.

RESULTS: The percentage of tobacco users in urban Mumbai was quite low at 4.8% compared with rural Kasara (36%) and Assam (76%); and 74.6% of the children were aware that tobacco use was dangerous and harmful to health. The average age of initiation was 9 years. Out of the 1004 children surveyed, 253 were tobacco users and 79% were males. Of the 1700 children screened, 23.5% presented with precancerous oral lesions.

CONCLUSION: This study addresses the tobacco habits of a typical sample of marginalized children in India and the need for effective interventions aiming at reducing the burden of tobacco-related cancers by controlling at the point of initiation.

PMID: 20622408 [PubMed - indexed for MEDLINE]


Abstract

Radio, television (TV), movies, video games, cell phones, and computer networks have assumed central roles in our children's daily lives. The media has demonstrated potentially profound effects, both positive and negative, on children's cognitive, social, and behavioral development. Considering the increasing exposure of children to newer forms of media, we decided to review the current literature on the effects of media on child health both in the Western countries and India. It is widely accepted that media has profound influence on child health, including violence, obesity, tobacco and alcohol use, and risky sexual behaviors. Simultaneously, media may have some positive effects on child health. We need to find ways to optimize the role of media in our society, taking advantage of their positive attributes and minimizing their negative ones. We need to understand better how to reverse the negative impact of media and make it more positive.

PMID: 20683108 [PubMed - indexed for MEDLINE]

Sharma DC. Tobacco use among India's street children raises concern. Lancet Oncol. 2009 Sep; 10(9):844.

(No abstract available)

PMID: 19725170 [PubMed - indexed for MEDLINE]


Abstract

BACKGROUND: Tobacco consumption is a major health menace owing to its widespread use particularly among adolescents. Owing to the presence of impressionable, curious minds, adolescents are highly prone to a number of influences within and outside home, leading them to experiment with tobacco. The addictive nature of tobacco is potent enough to turn these experimental users to addicts.

OBJECTIVES: To identify the prominent factors leading to initiation of tobacco use among adolescents of Moradabad.
MATERIALS AND METHODS: Two-stage sampling was used to identify 590 adolescents (study population) from four senior secondary schools in Moradabad. The response towards tobacco, and its use, was assessed through structured questionnaires. Responses of all study population and association between dependent and explanatory variables were assessed using chi2 test (Chi-square test) using SPSS package (version 12).

RESULTS: The study results show that 17.3% of the adolescents have experimented with tobacco. Curiosity and peer pressure were the main reasons behind trying tobacco. Parental tobacco status, especially place of use (at home or outside), had a significant influence on adolescents experimenting tobacco.

CONCLUSION: Tobacco use by parents is likely to influence adolescents, as they perceive tobacco use as a positive and acceptable behavior, and develop favorable personal beliefs and subjective norms towards tobacco use.

PMID: 19884721 [PubMed - indexed for MEDLINE]


Abstract

Each day in India, an estimated 5,500 youth initiate tobacco use, contributing to predictions that by 2020, tobacco will account for 13% of all deaths in India. Project MYTRI (Mobilizing Youth for Tobacco-Related Initiatives in India) is a multi-component school-based intervention designed to prevent and reduce tobacco use among adolescents in Delhi and Chennai, India. The intervention was implemented over the 2004-2006 school years and involved 6th and 8th grade students in 32 classrooms. Students participated in peer-led classroom activities involving games, competitions, and other activities intended to target a number of psychosocial risk factors believed to prevent tobacco use among urban Indian youth. To more fully understand how Project MYTRI influenced students' intentions to smoke or chew tobacco, the current study used mediation analysis to investigate whether Project MYTRI altered the psychosocial risk factors as intended, and whether the changes in psychosocial risk factors were, in turn, responsible for altering students' tobacco-use intentions. Multi-level mediation models were estimated using student data from baseline and 1-year follow-up surveys. Results indicated that the psychosocial risk factors Knowledge of Health Effects, Normative Beliefs, Reasons to Use Tobacco, and Perceived Prevalence were significant mediators between the intervention activities and students' tobacco use intentions. Evidence of inconsistent mediation was observed for the Perceived Prevalence factor. These findings, combined with those from qualitative research and the second-year student data, will help to illuminate the impact of Project MYTRI on participating youth.

PMID: 19023657 [PubMed - indexed for MEDLINE] PMCID: PMC2821665


Abstract

OBJECTIVES: We assessed the effectiveness of a 2-year multicomponent, school-based intervention designed to reduce tobacco use rates among adolescents in an urban area of India.

METHODS: Students from 32 schools in Delhi and Chennai, India, were recruited and randomly assigned to an intervention or control group. Baseline, intermediate, and outcome data were collected from 2 cohorts of 6th- and 8th-grade students in 2004; 14,063 students took part in the study and completed a survey in 2004, 2005, or 2006. The intervention consisted of behavioral classroom curricula, school posters, a parental involvement component, and peer-led activism. The main outcome measures were self-reported use of cigarettes, bidis (small hand-rolled, often flavored, cigarettes), and chewing tobacco and future intentions to smoke or use chewing tobacco.
RESULTS: Findings showed that students in the intervention group were significantly less likely than were students in the control group to exhibit increases in cigarette smoking or bidi smoking over the 2-year study period. They were also less likely to intend to smoke or chew tobacco in the future.

CONCLUSIONS: School-based programs similar to the intervention examined here should be considered as part of a multi-strategy approach to reducing tobacco use among young people in India.

PMID: 19299670 [PubMed - indexed for MEDLINE] PMCID: PMC2667859


Abstract

INTRODUCTION: In 2004, baseline surveys of Project MYTRI, a randomized intervention trial in Chennai and Delhi, India, found that tobacco use among 6th graders was greater than that among 8th graders. These results were surprising - typically, tobacco use increases with grade level. The present study aimed to assess whether this unique differential was sustained over time, as students moved into higher grades.

METHODS: Self-reported data from a sample of youth (n=3,404) present at three annual surveys (2004, 2005, 2006) were analyzed. Mixed-effects regression models were used to compare prevalence of lifetime tobacco use and nine psychosocial risk factor scales between two student cohorts, 6th grade (or younger) cohort and 8th grade (or older) cohort. Stratified analyses were also conducted by gender, age, city and school type.

RESULTS: From 2004 to 2006, the 6th grade (or younger) cohort of students reported higher rates of lifetime tobacco use, and these differences were maintained over two years, even when the study sample was stratified by gender, age, city and school type. Similarly, students in the 6th grade (or younger) cohort scored greater risk for tobacco use on all psychosocial risk factors analyzed here.

DISCUSSION: Tobacco use was found to be problematic among students in two Indian cities, particularly so for those in younger grades. Projections of health impact due to tobacco may be larger than anticipated if these adolescents continue to use tobacco as young adults. Further epidemiologic research and interventions to curb tobacco use among young(er) adolescents are warranted.

PMID: 20104970 [PubMed - indexed for MEDLINE]


Abstract

Mobilising Youth for Tobacco-Related Initiatives in India (Project MYTRI) is a randomized community trial to prevent tobacco use among students in Grades 6 through 9 in 32 private and government schools in Delhi and Chennai, India (N=12,484). The project is a partnership between researchers and practitioners in the United States and India. This article describes the steps that were carried out to ensure that prior effective programs are appropriate and applicable to India. These steps involve (a) developing a conceptual behavioral intervention model, (b) ensuring the appropriateness of the model for urban India, (c) developing intervention strategies that modify factors in the model, (d) implementing the MYTRI program with more than 5,000 students, and (e) evaluating the process and outcomes of the intervention. Data to date suggest that this process has been successful, including high participation rates, teacher perceptions of appropriateness, and agreements for further implementation.

PMID: 16861597 [PubMed - indexed for MEDLINE]

Abstract

This study examined whether the distribution of tobacco use and related psychosocial risk factors among youth in urban India vary by socioeconomic status (SES). Data were derived from a cross-sectional survey of students enrolled in the 6th and 8th grades in 32 schools in Delhi and Chennai (N = 11,642). The survey was conducted in 2004, before the implementation of a program designed to prevent and reduce tobacco use (MYTRI). Mixed-effect regression models were used (a) to determine the prevalence of tobacco use among private (higher SES) and government (lower SES) school students, (b) to investigate whether certain psychosocial factors were associated with increased tobacco use, and (c) to determine how these factors varied by school type. Ever-use of multiple forms of tobacco (e.g., gutka, bidis, and cigarettes) was more prevalent among government school students than private school students. After adjusting for city, gender, grade, and age, we found the prevalence rate for ever-use of any tobacco product to be 18.9% for government school students, compared with 12.2% for private school students (p<.01). Students in government schools scored lower than private school students on most psychosocial risk factors for tobacco use studied here, indicating higher risk. Government school students scored the lowest for refusal skills, self-efficacy, and reasons not to use tobacco. Social susceptibility to chewing tobacco and social susceptibility to smoking were strong correlates of current tobacco use among government school students. Exposure to tobacco advertising was also a strong correlate of current tobacco use for government school students but not private school students. In two large cities of India, students attending government schools are using many forms of tobacco at higher rates than private school students. The psychosocial risk profile of government school students suggests they are more vulnerable to initiation and use and to outside influences that encourage use.

PMID: 18188751 [PubMed - indexed for MEDLINE]


Abstract not available

PMID:19876489[PubMed] PMCID:PMC2763671


Abstract

The purpose of this article is to present the intermediate results for Project MYTRI, a school-based, multiple component intervention designed to prevent and reduce many forms of tobacco use (chewing tobacco, cigarettes, and bidis) among youth in India. The intervention is based on effective models in the United States "translated" for use in this context. The intervention targets two cohorts of students who were in the 6th and 8th grade when the study started. Thirty-two schools in Delhi (north India) and Chennai (south India) were randomized to receive the intervention (n = 16) or serve as a delayed intervention control (n = 16). Students in these schools were surveyed before the intervention began and at an intermediate point, 1 year into this 2-year intervention (n = 8,369). A test of the changes in risk factors for tobacco use between the baseline and intermediate surveys revealed that, compared with the control, students in the intervention condition (a) had better knowledge about the health effects of tobacco (P < 0.01); (b) believed that there were more negative social consequences to using tobacco (P = 0.04); (c) had fewer reasons to use tobacco (P < 0.01); (d) had more reasons not to use tobacco (P = 0.03); (e) were less socially susceptible to chewing (P = 0.04) and smoking (P = 0.03) tobacco; (f) perceived fewer peers and adults around them smoked (P < 0.01) or chewed (P < 0.01) tobacco; (g) felt that tobacco use was not acceptable, especially among their peers (P < 0.01); (h) were more confident in their ability to advocate for tobacco control (P = 0.03); (i) were more knowledgeable about tobacco control policies (P < 0.01); and (j) supported these policies, too (P = 0.04). Fewer students in the intervention condition reported having intentions to smoke tobacco in the next year (P = 0.02) or chew tobacco when they reached college (P < 0.01). No changes in actual tobacco use were observed at this stage of the study.

PMID: 17548662 [PubMed - indexed for MEDLINE]

Abstract

BACKGROUND: Tobacco use is increasing among adolescents. We conducted this study to find prevalence and correlates of tobacco use among adolescent boys in Trivandrum city, Kerala.

METHODS: Using a two-stage cluster sampling technique, 1323 boys (12-19 years) were selected from 14 schools. Information on tobacco use, academic performance, pocket money, and other variables was collected using a questionnaire. Multivariate analyses were done to find associations between current use of tobacco and other variables.

RESULTS: Prevalence of current tobacco use was 11.3% (95% CI 9.6-13.0). Current tobacco use was 2.9 times higher among older boys compared to younger boys (OR 2.9, CI 1.6-5.3), 2 times higher among boys whose fathers used tobacco (OR 2.0, CI 1.3-3.1), 2.9 times higher among boys whose friends used tobacco (OR 2.9, CI 1.6-5.1) compared to their counterparts, 3 times higher among boys securing poor (<40% marks) grade compared to those securing excellent (>80% marks) grade (OR 3.0, CI 1.4-6.6), and 4 times higher among those who received pocket money compared to those who did not (OR 4.0, CI 2.2-7.4).

CONCLUSIONS: Health programs to quit tobacco are suggested in schools with special emphasis on poor performers, those receiving pocket money, and those whose fathers and friends use tobacco.

PMID: 15917069 [PubMed - indexed for MEDLINE]


No abstract available

PMID: 16085985 [PubMed - indexed for MEDLINE]


Abstract

This article discusses the findings of Focus Group Discussions (FGDs) that were conducted as a formative assessment for Project MYTRI (Mobilizing Youth for Tobacco Related Initiatives in India), a randomized, multicomponent, school-based trial to prevent and control tobacco use among youth in India. Forty-eight FGDs were conducted with students (N=435) in sixth and eighth grades in six schools in Delhi, India. Key findings include: (a) students in government schools reported as "consumers" of tobacco, whereas students in private schools reported as "commentators"; (b) parents and peers have a strong influence on youth tobacco use; (c) chewing gutka is considered less harmful and more accessible than smoking cigarettes; (d) schools are not promoting tobacco control activities; and (e) students were enthusiastic about the role government should play in tobacco control. These findings are being used to develop a comprehensive intervention program to prevent and control tobacco use among Indian youth.

PMID: 15851544 [PubMed - indexed for MEDLINE]


Abstract

In order to assess the prevalence and correlates of tobacco use among school students (10-12 years), information on tobacco use and socio-demographic variables was collected from 1626 students (male 1027) using a questionnaire. Bivariate and multiple regression analysis were done. Ever users in the sample were 16.6% (95 % CI 14.8, 18.4) and current users were 5.1 % (95 % CI 4.1, 61). Current use was significantly associated with male sex (OR 2.3, CI 1.09 5.14), students not participating in sports (OR 2, CI 1.04 4.04), tobacco use among friends (OR 4, CI 2.02 8.25), unaware of harmful effects of tobacco (OR 2.6, CI 1.1 6.14) and students who were used by parents and teachers to buy tobacco for them (OR 2.1, CI 1.4 4.19). Tobacco control programs focusing on male students, those who do not participate in sports, those whose friends use tobacco and those who are used by parents and teachers to buy tobacco are warranted.


Abstract

BACKGROUND: Tobacco use, which is the cause of several respiratory diseases, generally starts in the teens. Global Youth Tobacco Survey (GYTS) is an international initiative to investigate the tobacco use in school going youth of 13 to 15 years of age. This report describes the GYTS findings in the North Indian region.

METHODS: A two-stage cluster sample was used with selection of schools on probability proportional to enrollment size followed by systematic equal probability sampling with a random start of classes from each school. The 85-item questionnaire included 'core GYTS' and other additional questions. Data analysis was performed using Epi Info 3.2 software and the results accounted for the complex sampling design and weighting factors in the data set.

RESULTS: The sample consisted of 9319 students out of the total eligible population of 30488 from 100 schools. The prevalence of ever-use of tobacco varied between 2.9 to 8.5% in boys and 1.5 to 9.8% in girls. The prevalence was highest in Chandigarh and lowest in Punjab. Between 16 to 46% of students were exposed to the habit of tobacco among parents or friends. There were 10 to 34% students who were passively exposed to environmental tobacco smoke.

CONCLUSION: Tobacco use is present in up to 10 percent of school going youth in the region. A majority of them had desired to quit. Tobacco control and cessation programmes therefore, remain important health issues.


Abstract

BACKGROUND: Smoking and tobacco use is a major public health issue in developing countries. We performed an epidemiological study to determine the prevalence of smoking and tobacco-use and awareness of risks of tobacco use among school children.

METHODS: Students in randomly selected schools in Jaipur were studied. Students in classes 9-12 (age 13-18 years, boys 2866, girls 939) were enrolled. Medical social workers filled in information regarding presence of smoking and other forms of tobacco use among these children. Details of presence of tobacco use among family members, awareness of harms of tobacco and proactive role of children were also inquired.

RESULTS: Fifty nine boys (2.1%, 95% confidence interval 1.5% to 2.6%) and 16 girls (1.7%, 0.9% to 2.5%) agreed to current tobacco use. Smoking cigarettes or bidis was present in 43 boys (1.5%, 72.8% of users) and 8
girls (0.8%, 50.0% of users). Smoking or tobacco use was present in immediate family of 1208 boys (42.1%) and 304 girls (32.4%) (p<0.001) but was significantly more in family of children who used tobacco (boys 51/59, 86.4%, girls 11/16, 68.8%), 2842 boys (99.2%) boys and 934 girls (99.5%) were aware that tobacco use is harmful and similar proportions disliked it. More than 90% students were aware of its importance in causing respiratory diseases and the majority of boys and girls, respectively, knew of its potential to cause general debility (55.7%, 54.1%), heart disease (56.8%, 58.3%), cancer (64.6%, 64.8%), impotence (40.9%, 23.2%), ulcer of stomach (48.1%, 46.4%) and death (68.2%, 68.1%). 76.4% boys and 75.7% girls considered quitting to smoke beneficial and 77.1% boys and 75.8% girls knew that passive smoking is bad. 75.7% boys and 75.0% girls would insist that no-one smokes in their presence. 1592 boys (55.5%) and 507 girls (54.0%) remembered seeing tobacco related advertisement in news-paper and could recall name of the brand. 57.2% boys and 62.4% girls agreed to participate in a tobacco-awareness and cessation program, however only 5.2% of the students had attempted tobacco-control among family or peers.

CONCLUSIONS: There is low prevalence of smoking and tobacco use in school children in Jaipur. Awareness of harmful effects of tobacco is high.

Comment in

- Tobacco free India: save our children. [J Assoc Physicians India. 2006]

PMID: 16941790 [PubMed - indexed for MEDLINE]


Abstract

The association between school tobacco policies and tobacco use prevalence among students were examined. A two stage cluster sample design with probability proportional to the enrolment in grades VIII-X was used. Comparison was made between schools with a tobacco policy (Federal schools) and schools without a policy (State schools). Stratified probability samples of 50 schools each were selected. SUDAAN and the C-sample procedure in Epi Info was used for statistical analysis. Students from State schools (without tobacco policy) reported significantly higher ever and current any tobacco use, current smokeless tobacco use and current smoking compared to Federal schools (with tobacco policy) both in rural and urban areas. Classroom teaching on the harmful effects of tobacco was significantly higher (17-24 times) in Federal schools than State schools both in rural and urban areas. Parental tobacco use was similar for students in Federal and State schools. Students attending state schools were more likely than students attending Federal schools to have friends who smoke or chew tobacco. These findings suggest that the wider introduction of comprehensive school policies may help to reduce adolescent tobacco use.

PMID: 15709597 [PubMed - indexed for MEDLINE]


Abstract

Determination of the prevalence and attitudes toward tobacco use was assessed among 13-15 years school students in Bihar (India).

SETTINGS AND DESIGN: Schools having grade 8-10 in Bihar. A two stage cluster sample design was used. SUDAAN and the C-sample procedure in Epi Info was used for statistical analysis. Of the 2636 respondents, 71.8% (76.5% boys, 57.2% girls) were ever tobacco users; of them 48.9% had used tobacco before 10 years of age. Current use was reported by 58.9% (Boys 61.4%, Girls 51.2%); smokeless tobacco by 55.6% (Boys 57.6%, Girls 49.2%); and smoking by 19.4% (23.0% boys, 7.8% girls). Nearly one third (29%) students were exposed to ETS inside their homes and nearly half (48%) outside their homes. Almost all students reported watching cigarette and gutka advertisements in almost all kinds of media and events. Tobacco use by parents and friends,
knowledge on harmful effects of chewing tobacco, smoking and environmental smoke, and attitudes on tobacco use by others were strongly associated with student tobacco use. Current tobacco use was reported significantly more by students who received pocket money/or were earning than by students who did not receive any pocket money/or did not earn (p value for trend <0.0001). Over half of current users (56%) bought their tobacco products from stores; of these, over 3/4th (77.2%) of them despite their age, had no difficulty in procuring these products. Teaching in schools regarding harmful effects of tobacco use was non-existent (3%). This urgently requires a comprehensive prevention program in schools and the community especially targeted towards girls.


Abstract

Information about prevalence of tobacco use was assessed among school children in Goa, India. Among 50 sampled schools, the school response rate was 98% and, over 94% students participated in the survey (56% were boys, 44% girls). Ever tobacco use was reported by 13.5% of which over 40% reported initiation at 10 years of age or earlier. The current tobacco use (any product) was reported by 4.5%, without much difference in smokeless tobacco use (2.8%) and smoking (3.0%). Smokeless tobacco was used mainly in the form of applying mishri, tobacco containing toothpaste or toothpowder. Smoking among boys was 3.5% and girls 2.2%. Non-users reported knowledge about the harmful effect of tobacco two to three times more than tobacco users. Over about 50% of students reported having been taught in school about the dangers of tobacco use. Tobacco users (60.5%) as well as non-users (63%) favoured ban smoking in public places equally. Tobacco use by parents and close friends was positively associated with students' current tobacco use.


Abstract

Information about tobacco use prevalence, knowledge and attitude was assessed among school personnel in schools of West Bengal. Statistical analysis was done using SUDAAN and the C-sample procedure in Epi Info. The school response rate was 100%. Current any smoking and smokeless tobacco use was reported by 30.9% and 13.1% school personnel, respectively. Current daily smoking, and smokeless tobacco use reported by 20.4%, and 5.8% school personnel respectively. Men reported significantly more for all kinds of daily tobacco use as compared to women. School tobacco control policy on three scales was reported poor (17.7-30%). However most of the school personnel felt need for such policies (82.7-93.6%). Teaching and training on tobacco was reported low (29.9%-50.4%). However most of the school personnel (79.1-93.6%) were supportive on different measures of tobacco control. Training of school personnel may provide students with essential tools to help them adopt and maintain a smoke free lifestyle.


Comment in

- WHO Framework Convention on Tobacco Control has major flaw. [BMJ. 2004]

PMID: 14764494 [PubMed - indexed for MEDLINE] PMCID: PMC338098
1.3. Health professionals (including medical and dental students)


Abstract

BACKGROUND: Tobacco is one of the most important causes of morbidity and mortality. Tobacco toll in India has one-fifth of all worldwide death attributed to tobacco. There are 700000 deaths per year due to smoking and 800000-900000 per year to all forms of tobacco use of exposure in India. The role of dentist in supporting their patients to quit smoking has been recognized. The present study was conducted to know the attitudes, practices and barriers in tobacco cessation among dentists of Udaipur city (Rajasthan, India). METHODS: A pretested, close-ended, self-administered, coded questionnaire was distributed among all the 262 dental health practitioners and the teaching staff. Out of 262 questionnaires distributed among the dentist, 151 dentists filled out and returned the questionnaire. FINDINGS: The majority of the dentists (98.7%) agreed that it was their responsibility to provide smoking cessation counseling. 54.3% of dentists agreed that such discussions were too time consuming. 37.1% thought they lacked knowledge regarding this subject. 35.8% feared to an extent about patient leaving their clinic if counseled much. CONCLUSION: In general, the dentists had a favorable attitude in tobacco cessation counseling for the patients; however, the lack of time and knowledge and to an extent, a fear that the patients would leave their clinic, was the main identified barriers.

PMID: 25140220 [PubMed] PMCID: PMC4137435


Abstract

Tobacco use is described as the single most preventable cause of morbidity and mortality globally, with the World Bank predicting over 450 million tobacco-related deaths in the next fifty years. In India, the proportion of all deaths that can be attributed to tobacco use is expected to rise from 1.4% in 1990 to 13.3% in 2020 of which smoking alone will cause about 930,000 adult deaths by 2010. Many studies have shown that counseling from a health professional is an effective method of helping patients quit the tobacco habit. Tobacco cessation needs to be urgently expanded by training health professionals in providing routine clinical interventions, increasing availability and subsidies of pharmacotherapy, developing wide-reaching strategies such as quit lines, and cost-effective strategies, including group interventions. The WHO Framework Convention on Tobacco Control (FCTC) emphasizes the vital contribution of participation of health professional bodies, as well as training and healthcare institutions in tobacco control efforts. Dentists can play an important role in helping patients quit using tobacco. One of the key strategies to reduce tobacco-related morbidity and mortality is to encourage the involvement of health professionals in tobacco-use prevention and cessation counselling. The dental office is an ideal setting for tobacco cessation services since preventive treatment services, oral screening, and patient education have always been a large part of the dental practice.

PMID: 24716989 [PubMed - indexed for MEDLINE]


Abstract

PURPOSE: Oral cancer presents with high mortality rates, and the likelihood of survival is remarkably better when detected early. The present study aimed to assess the awareness of general dental practitioners (GDPs) about oral screening and biopsy procedures in Udaipur, India.
MATERIALS AND METHODS: In this cross-sectional study, 83 GDPs were surveyed using a self-administered structured questionnaire consisting of several mandatory and optional questions. The data were analysed and frequency distribution was performed.

RESULTS: Most of the GDPs adequately performed complete oral cavity examinations and were aware of suspicious oral lesions, most common sites and risk factors for oral pre-cancer/cancer, but did not inquire about patients’ tobacco/alcohol consumption habits. Half of them referred lesions requiring biopsy to a specialist/higher centre rather than performing biopsies themselves, even after recognising the importance of biopsy as a diagnostic tool due to concerns of inadequate experience and instruments required. Varied results regarding selection of the appropriate site for biopsy and preservation of biopsied specimens were noted.

CONCLUSION: Most of the GDPs were adequately aware of oral screening and biopsy procedures but felt reluctant to perform them, which suggests that dental education programmes are needed for GDPs in oral pre-cancer/cancer detection as well as screening and diagnostic procedures.

PMID: 25386629 [PubMed - as supplied by publisher]

Abstract

PURPOSE: The aim of this study is to analyze the smoking prevalence among the dental students and need of promoting tobacco education and intervention to explore their knowledge about smoking related risk factors. The study also perceives the attitudes and practices of students toward the tobacco consumption and their responsibilities toward community.

METHODS: Totally, 53 male students participated in the study (21 juniors and 32 seniors). The training programme was divided into three modules and the questionnaire was administered before and after the counseling sessions, which could provide the comparative data of the students’ views about the smoking cessation.

RESULTS: The most commonly practiced way of tobacco consumption was found to be cigarette smoking (90.6%), while a few consumed Gutka (9.4%). Junior students quoted 100% agreement for getting benefitted from the counseling programme, while from the senior group, 68.8% agreed to be benefitted. Bivariate statistical analysis was conducted using Pearson’s Chi-Square test for testing the difference across the age groups. P-values less than 0.05 are considered to be statistically significant.

CONCLUSION: Curbing tobacco influence on dental students in their initial days, can ensure them a smoke-free life. At the same time, they can refrain from feeling the embarrassment and lack of confidence when they see their patients. However, tobacco education and intervention programmes can motivate the students and increase their potential to be the credible advisors regarding smoking cessation.

PMID: 25284069[PubMed - as supplied by publisher]

Abstract

BACKGROUND: The increasing use of tobacco among youths warrants the need for dental health professionals to effectively provide tobacco cessation counselling (TCC) in the office and community settings. However, there have been concerns among the dental professionals regarding TCC in dental settings. AIMS AND OBJECTIVES: To assess the attitude of dental professionals including the dentist and dental hygienist towards the TCC and identify the possible barriers towards the implementation of these practices in the rural and urban areas of Modinagar district.
MATERIALS AND METHODS: The present questionnaire based survey was carried among the qualified dentist and dental hygienist from the urban and rural areas of the Modinagar district to attitudes in tobacco cessation, practices in tobacco cessation interventions and related barriers towards implementation. The survey data were analyzed using the SPSS 16 version software package. The descriptive statistics (frequency) was generated for the each question to assess their attitude and practice.

RESULTS: The response rate of the questionnaire among the dentist and dental hygienist was 100%. The attitude of the majority of dentist towards the tobacco cessation counselling was positive as compared to the dental hygienist. 69.2% of the dentist were of the view that the dental health professionals should provide TCC as compared to 54.2% among the hygienist. Regarding the practice, only 12.5% and 5.8% of the dentist and dental hygienist had ever used the nicotine replacement therapy in their dental practice. The lack of the knowledge and information regarding TCC was the only perceived barrier among the dentists (51.7%) and dental hygienist (68.3%).

CONCLUSION:

Dental professionals must expand their horizon and armamentarium to include TCC strategies inclusive of their regular preventive and therapeutic treatment modalities. Also, the dental institutions should include TCC into the curriculum, but it should not be just theoretical knowledge rather it must have a practical component.

25386513[PubMed] PMCID: PMC4225965


Abstract

CONTEXT: Tobacco is a leading cause of disease and premature death. Most of the smokers visit a doctor for various health related ailments and thus such clinic visits provide many opportunities for interventions and professional tobacco cessation advice. AIMS: The primary aim of the following study is to assess the physician practices, perspectives, resources, barriers and education relating to tobacco cessation and their perceived need for training for the same. The secondary aim is to compare the physician's cessation practices from patient's perspective.

SETTINGS AND DESIGN: A descriptive study was conducted in a hospital attached to Medical College in Mysore city, Karnataka.

MATERIALS AND METHODS: Information about doctor's practices, perspectives and their perceived need for training in tobacco cessation were collected using pre-structured self-administered Questionnaire, which were distributed in person. Patient's practices and perspectives were assessed using a pre-structured Oral Questionnaire.

RESULTS: Almost 95% of physicians said that they ask patients about their smoking status and 94% advise them to quit smoking, but only 50% assist the patient to quit smoking and only 28% arrange follow-up visits. Thus, they do not regularly provide assistance to help patients quit, even though 98% of the physicians believed that helping patients to quit was a part of their role. Only 18% and 35% of the physicians said that Undergraduate Medical Education and Post Graduate Medical Education respectively prepared them very well to participate in smoking cessation activities.

CONCLUSIONS: Tobacco cessation requires repeated and regular assistance. Such assistance is not being provided to patients by attending doctors. Our medical education system is failing to impart the necessary skills to doctors, needed to help patients quit smoking. Reforms in education are needed so as to prepare the physician to effectively address this problem.

PMID: 24574555 [PubMed] PMCID: PMC3927241

**Abstract**

**INTRODUCTION:** Hypertension is a modern day epidemic and growing public health problem. A sizable proportion of world populations suffer from prehypertension or hypertension.

**OBJECTIVES:** The present study was carried out to detect the prevalence of undiagnosed hypertension among undergraduate medical students and to identify the associated risk factors.

**MATERIALS AND METHODS:** The study was observational in nature and was done in medical colleges of Bengal. Study tool was a predesigned, pretested, validated, and semi-structured questionnaire containing both open-ended and close-ended questions. Data were collected through self-administration, clinical, and anthropometric examination. The data were then tabulated, analyzed and interpretation was done by using percentage and Chi-square test.

**RESULTS:** Most of the students (63%) were young adults, predominantly males (67%) and day scholars (71%). Almost one-third of them either suffered from hypertension or at risk of hypertension. Hypertension was found higher among male students. Family history of hypertension or diabetes mellitus was not associated with hypertension. Vegetarian or nonvegetarian diet or extra-salt consumption was also not associated with hypertension. Smoking was shown positively associated with hypertension but alcohol consumption was not. Higher per capita monthly income and overweight or obesity were shown positively associated with hypertension.

**CONCLUSION:** The overall prevalence of hypertension in this study was 13% and there were positive association of hypertension with multiple socio-demographic factors like age, sex, type of family, per capita monthly income, residence, BMI, smoking, etc.

PMID:23974734 [PubMed - indexed for MEDLINE]

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**Abstract**

Active cigarette smoking is the major cause of lung cancer and an important established cause of cardiovascular disease mortality. Risks have been shown to increase with even light or intermittent active smoking.

**OBJECTIVES:** To assess the prevalence of smoking, age of initiation and the knowledge and attitude towards smoking among dental college students of Rajasthan, India. **METHODS:** A cross-sectional study was conducted among 1,383 undergraduate and postgraduate dental college students of Rajasthan using self-administered closed-ended questionnaires consisting of 14 questions divided into four sections. A chi-square test was used to determine the association between dependent and independent variables. **RESULTS:** Of all the participants, 777 (56.2%) were male and 606 (43.8%) were female. Among these 258 (33.2%) males and 51 (8.4%) females had tried or experimented smoking. Majority of males (24.7%) initiated this habit at a very young age, before 16 years. About 79.5% males and 72.3% females felt that it was difficult to quit smoking. According to 88.1% females and 48.7% males, people feel less comfortable at public places or social gatherings.

**CONCLUSION:** The study has shown that the smoking prevalence among dental college students is high and has managed to contribute additional information regarding their attitude towards smoking. Comprehensive tobacco education and smoking cessation programmes should be aggressively promoted in dental settings.

PMID: 24074018 [PubMed - indexed for MEDLINE]

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Abstract
The objective of this study was to assess the tobacco cessation knowledge, attitudes, practices, and perceived barriers of dental interns (students in their last year of the five-year dental curriculum) in India as well as to assess the adequacy of training in tobacco use cessation (TUC) counselling. This was a cross-sectional questionnaire study conducted with 1,521 interns at fifty one dental colleges of India selected by multistage random sampling. The survey instrument was a fifty-nine-item, self-structured, and self-administered questionnaire. Fifteen questions were about knowledge and attitudes, with twenty-two about practices, fifteen about barriers, and seven about curriculum adequacy; demographic data were also collected. The response rate was 99.7 percent. The results showed that 38.8 percent had knowledge, 30.8 percent had positive attitudes, 19.2 percent practiced TUC, 43 percent experienced barriers, and 85.2 percent agreed on receiving extensive curriculum on tobacco cessation. Only 1 percent were aware of the 5As, the 5Rs protocol, and the motivational interviewing technique of TUC. These respondents' knowledge, attitudes, and practices were below normative level, and they took a superficial approach to TUC. The perceived barriers were very high and included curriculum inadequacy. The results of this study help show there is an urgent need to revise the tobacco curriculum in dental schools in India to make students more confident to practice this aspect of dentistry independently.

PMID: 24098044 [PubMed - indexed for MEDLINE]


Abstract
BACKGROUND: The objective of the study was to determine the knowledge, attitude and behaviors of the practicing dentists regarding tobacco cessation counseling (TCC) in Chhattisgarh state and also the barriers that prevent them from doing so.

MATERIALS AND METHODS: The study was conducted among dental practitioners of Raipur district, Chhattisgarh state (India). The sampling frame was registration with the State Dental Council and practicing in Raipur district. A questionnaire was personally administered and the practitioners were given explanations regarding how to complete it. Only descriptive statistics were calculated (SPSS version 16 for Windows).

RESULTS: Based on the responding dentists' self reports, 76% were not confident in TCC, 48% did not assume TCC to be their responsibility, 17% considered that it might have a negative impact on their clinical practice, whereas 24% considered it might take away precious time from their practice, 25% considered TCC by dentists to be effective to a considerable extent and 80% considered TCC activities are not effective due to lack of formal training, 69% considered dental clinics as an appropriate place for TCC but 82% thought there must be separate TCC centre and 100% of the dentists wanted TCC training to be a part of practice and that it should be included in dental curriculum. Some 95% of them were of the view that tobacco products should be banned in India and 86% responded that health professionals must refrain from tobacco habits so to act as role models for society.

CONCLUSIONS: Dental professionals must expand their armamentarium to include TCC strategies in their clinical practice. The dental institutions should include TCC in the curriculum and the dental professionals at the primary and the community health care level should also be trained in TCC to treat tobacco dependence.

PMID: 24289640 [PubMed - indexed for MEDLINE]


Abstract
AIM: The aim of the study was to assess the prevalence of tobacco use and knowledge of and attitude towards cessation counselling among dental students in Himachal Pradesh State, India.

METHOD: The present study was conducted with the 219 third-year Bachelor of Dental Surgery (BDS) students in the five dental colleges of Himachal Pradesh during the month of March 2012. The Global Health Professional Students Survey (GHPSS) questionnaire, developed by the World Health Organization (WHO), the US Centers for Disease Control and Prevention (CDC) and the Canadian Public Health Association, was used in this study. The data were evaluated using statistical software and statistically tested with the chi-square test.
RESULTS: The response was 210 (96%). Lifetime prevalence was 15% for smoking and 2% for tobacco use other than for smoking. Eighteen (9%) students were current smokers and four (2%) were tobacco users other than for smoking. Male students were significantly (P<0.001) more likely than female students to be current cigarette smokers. Approximately 14 (47%) of sometime smokers had smoked on school property and two (50%) of the sometime users of other tobacco products had used those products on school property. As for attitudes, 169 (85%) felt that health professionals serve as role models for their patients and the public. Only 17 (8.5%) of surveyed students had received formal instruction in smoking-cessation approaches during their training and 167 (84.3%) thought that health professionals should receive specific training on cessation techniques.

CONCLUSION: Although the current prevalence of tobacco use among third-year dental students in Himachal Pradesh is low, it still needs to be addressed by providing them with the necessary skills and support to quit smoking successfully and to provide counselling.

PMID: 23756422 [PubMed - indexed for MEDLINE]


Abstract

Tobacco cessation counseling (TCC) has been proven to be very effective in helping tobacco users to quit. Dentists can play a vital role in helping patients to quit tobacco use. The aim of this study was to examine five groups of Indian dental students' attitudes and practices regarding TCC. Out of 514 fifth-year students in five colleges of Karnataka, India, 456 students voluntarily participated. The thirty-five-item questionnaire consisted of four sections: demographic characteristics, practices in the institution, attitudes toward tobacco cessation programs in the dental setting, knowledge of tobacco counseling, and perceived barriers in counseling. To test the reliability of the survey items, Cronbach's alpha coefficient was used. Frequency distributions and percentages were examined for each item, and chi-square tests were used to analyze differences based on tobacco usage status. The sample consisted of 317 female and 139 male students. The majority of the students (n=429, 94 percent) reported that they give anti-tobacco usage advice to patients who smoke and planned to advise patients about tobacco cessation throughout their careers. Fewer students (n=314, 68.9 percent) indicated that such counseling would assist patients to quit. The major barriers were reported to be patients' resistance, inadequate skills, and poor knowledge about nicotine replacement therapy. This study found that these students had a positive attitude about TCC, along with adequate knowledge regarding the ill effects of tobacco. However, this study concludes that tobacco cessation should be given greater emphasis in the curriculum of Indian dental schools in order to expand the use of TCC in dental practices.

PMID: 23576597 [PubMed - indexed for MEDLINE]


Abstract

BACKGROUND: A total of 275 million tobacco users live throughout India and are in need of tobacco cessation services. However, the preparation of physicians to deliver this service at primary care health facilities remains unknown.

AIMS: The study aimed to examine the primary care physicians' preparedness to deliver tobacco cessation services in two Indian states.

METHOD: Researchers surveyed physicians working in primary care public health facilities, primarily in rural areas using a semi structured interview schedule. Physicians' preparedness was defined in the study as those possessing knowledge of tobacco cessation methods and exhibiting a positive attitude towards the benefits of tobacco cessation counselling as well as being willing to be part of tobacco prevention or cessation program.

RESULTS: Overall only 17% of physicians demonstrated adequate preparation to provide tobacco cessation services at primary care health facilities in both the States. The findings revealed minimal tobacco cessation training during formal medical education (21.3%) and on-the-job training (18.9%). Factors, like sex and age of service provider, type of health facility, location of health facility and number of patients attended by the service...
provider, failed to show significance during bivariate and regression analysis. Preparedness was significantly predicted by state health system.

CONCLUSION: The study highlights a lack of preparedness of primary care physicians to deliver tobacco cessation services. Both the curriculum in medical school and on-the-job training require an addition of a learning component on tobacco cessation. The addition of this component will enable existing primary care facilities to deliver tobacco cessation services.

PMID: 23589736 [PubMed] PMCID: PMC3626027


Abstract

BACKGROUND: Globally researchers have long back noted that the trend of substance use was on the rise particularly in the student population.

OBJECTIVE: To find out the prevalence and determinants of smoking practices among undergraduate medical students.

MATERIALS AND METHODS: A cross-sectional study was conducted among undergraduate medical (MBBS) students of a tertiary care medical college using a predesigned and pretested semi-structured self-administered anonymous questionnaire.

RESULTS: Among 182 participants, 55 (30%) were smokers; 85.45% were regular smokers; majority in the age group 20-22 years (70%); mostly males (98%). No significant difference was observed among urban and rural students, and religion had no association. The practice of smoking for last 6 months to 1 year was in 43.6% and 40% smoked less than 6 months. Half of them (50.9%) smoked 5-9 cigarettes per day. Peer pressure was significantly high in smokers (83.6%); 42% had other addictions. The effect of parental smoking on smoking habits of the participants was quite evident among smokers (82%), which was significantly higher than nonsmokers ($\chi^2=63.49, P<0.05$). Peer pressure was the most important risk factor (57.69%) of initiation of smoking habit followed by parental influence (16.49%). Among morbidities of smokers, 60.6% were suffering from regular cough, 6% from bronchitis, and 2% had asthma.

CONCLUSIONS: Our survey conducted on budding doctors surprisingly showed that undergraduate medical students smoke so much.

PMID:21966162[PubMed] PMCID: PMC3178948


Abstract

BACKGROUND & OBJECTIVE: Several studies have shown that health professionals' advice for tobacco cessation to tobacco users enhances quit rate. Little is known about doctor's present tobacco cessation efforts in India. We examined doctors' reported inquiry into patient's use of tobacco and assessed their perceived need for training in tobacco cessation.

METHODS: A cross-sectional survey was conducted in Kerala to collect information on doctor's practices, skills and perceived need for training in tobacco cessation. Pre-tested structured questionnaires were distributed in person to 432 male and 89 female doctors, of whom 264 male and 75 female doctors responded.

RESULTS: One third of all the doctors surveyed reported that they always ask patients about tobacco use, three fourths advise all patients routinely to quit irrespective of the smoking status of patients and one tenth offered useful information on how to quit. About 15 per cent reported they received information from medical representatives, 32 per cent reported they had sufficient training and 80 per cent expressed interest in receiving training to help smokers quit. Majority of all doctors surveyed most commonly asked and advised patients to quit tobacco when patients had lung, heart, mouth disease or cancer.
INTERPRETATION & CONCLUSION: Our results suggested that squalene may counteract the increase in body fat, BP and levels of plasma leptin, glucose, cholesterol and triglycerides. These effects of squalene may be further explored as a likely new approach for clinical management of high BP and obesity.

PMID:19491416[PubMed - indexed for MEDLINE]


Abstract

In developing nations where reductions in tobacco use have not been realized, it is critical that health professionals be encouraged to abstain from tobacco use. Data on tobacco use among health professionals in India are limited. We conducted cross-sectional surveys among 110 male medical school faculty (MSF), 229 physicians (67% male), 1130 medical students (46% male), and 73 female nursing students. Information on tobacco use and quit attempts was collected using structured questionnaires. Among the male respondents, current smokers were 15.1% of MSF, 13.1% of physicians, and 14.1% of medical students. Among current smokers, 42% of MSF and physicians and 51% of medical students had not attempted quitting in the last year. However, one third of MSF and physicians and 16% of medical students had attempted to quit at least 4 times. This is one of the first studies among health care professionals in India. Our findings show that a substantial proportion of physicians and medical students in Kerala continue to smoke. Smoking cessation programs are warranted in medical schools in Kerala. An initiative is presently underway by the authors to incorporate tobacco education into the medical school curriculum.

PMID:16564137[PubMed - indexed for MEDLINE]

1.3.1. Global Health Professions Student Survey (GHPSS)


Abstract

CONTEXT: Tobacco use by health professionals reflects the failure of healthcare systems in protecting not only beneficiaries of the system but also those involved in health care delivery.

AIM: The aim of this study was to report findings from the Global Health Professions Students Survey (GHPSS) conducted in medical, dental, nursing and pharmacy schools in India.

SETTINGS AND DESIGN: A cross-sectional survey was conducted in Indian dental and medical schools (in 2009), nursing (in 2007), and pharmacy (in 2008) schools.

MATERIALS AND METHODS: Anonymous, self-administered GHPSS questionnaire covering demographics, tobacco use prevalence, secondhand smoke (SHS) exposure, desire to quit smoking and training received to provide cessation counseling to patients was used.

STATISTICAL ANALYSIS: Proportions and prevalence were computed using SUDAAN and SPSS 15.0.

RESULTS: Current cigarette smoking and other tobacco use ranged from 3.4-13.4% and 4.5-11.6% respectively, in the four health professional schools, with the highest numbers for medical schools and males. Enforcement of smoking ban in medical schools was low (53%) compared to nursing (86.4%), pharmacy (85.5%), and dental (90.8%) schools. Ninety percent students thought health professionals have a role in giving smoking cessation advice to their patients. Three out of five current smokers wanted to quit. However, one out of two reported receiving help/advice to quit. Although all expressed the need, 29.1-54.8% students received cessation training in their schools.
CONCLUSION: Tobacco control policy, cessation training and initiatives to help students quit smoking should be undertaken.

PMID: 23442408 [PubMed - indexed for MEDLINE]


Abstract

The 2003 India Tobacco Control Act (ITCA) includes provisions designed to reduce tobacco consumption and protect citizens from exposure to secondhand smoke. India ratified the World Health Organization Framework Convention on Tobacco Control (WHO FCTC) on February 27, 2005. The WHO FCTC is the world's first public health treaty that aims to promote and protect public health and reduce the devastating health and economic impact of tobacco. The Global Health Professions Student Survey (GHPSS) was developed to track tobacco use among third-year dental, medical, nursing, and pharmacy students across countries. Data from the dental (2005), medical (2006), nursing (2007), and pharmacy (2008) GHPSS conducted in India showed high prevalence of tobacco use and a general lack of training by health professionals in patient cessation counseling techniques. The Ministry of Health and Family Welfare could use this information to monitor and evaluate the existing tobacco control program effort in India as well as to develop and implement new tobacco control program initiatives.

PMID: 20622411 [PubMed - indexed for MEDLINE]


Abstract

The Nursing Global Health Professions Student Survey (GHPSS) has been conducted in schools in 39 countries and the Gaza Strip/West Bank (identified as "sites" for the remainder of this paper). In half the sites, over 20% of the students currently smoked cigarettes, with males having higher rates than females in 22 sites. Over 60% of students reported having been exposed to secondhand smoke in public places in 23 of 39 sites. The majority of students recognized that they are role models in society, believed they should receive training on counseling patients to quit using tobacco, but few reported receiving any formal training. Tobacco control efforts must discourage tobacco use among health professionals, promote smoke-free workplaces, and implement programs that train health professionals in effective cessation-counseling techniques.

PMID: 20054453 [PubMed - indexed for MEDLINE] PMCID: PMC2790091

(India mentioned in full text for comparative purpose)


1.4. Educational Personnel and other professional groups

Abstract

OBJECTIVE: To assess the knowledge of primary school teachers in Dharwad, India, regarding the prevention of oral cancer and gum disease.

MATERIALS AND METHODS: In this cross sectional study a self-administered questionnaire was used for data collection. A total of 184 school teachers were selected for the study. A response rate of 96.7% (n = 178) was obtained.

RESULTS: Of the respondents, 36.5 % (n=65) had poor knowledge, while 27.5% had good knowledge regarding the prevention of oral cancer and gum disease. School teachers with postgraduate qualification were better informed with regard to the prevention of oral diseases as compared to those with only a bachelor degree. Factors such as education, sex, and type of institutional funding (public/private) were significantly correlated with the level of knowledge (R²=0.1128; P < 0.05).

CONCLUSION: School teachers need to be motivated to improve their awareness and knowledge about the prevention of oral cancer and gum diseases, particularly the younger teachers and those with only bachelor degrees. Establishment of school-based oral-health promotion programs in India is urgently required.

PMID: 24025870 [PubMed - in process]


Abstract

In India, tobacco kills 900,000 people every year though the burden of tobacco is faced disproportionately in poorer states such as Bihar. Teachers may be a particularly influential group in setting norms around tobacco use in the Indian context. However, tobacco use among teachers remains high and perceptions of tobacco-related health risks are unexplored. To qualitatively explore perceptions about tobacco use among teachers in Bihar and to examine how risk information may be communicated through a variety of message formats, 12 messages on tobacco health risks varying in formats were tested in focus groups with teachers from Bihar. Participants stated that teachers were already aware of tobacco-related health risks. To further increase awareness of these risks, the inclusion of evidence-based facts in messages was recommended. Communicating risk information using negative emotions had a great appeal to teachers and was deemed most effective for increasing risk perception. Messages using narratives of teachers’ personal accounts of quitting tobacco were deemed effective for increasing knowledge about the benefits of quitting. To conclude, messages using evidence-based information, possibly with negative emotions, testimonials with role models and those messages emphasizing self-efficacy in the format of narratives appear to appeal to teachers in Bihar.

PMID: 23221589 [PubMed - indexed for MEDLINE] PMCID: PMC3594928


Abstract

This article provides a theory-based, step-by-step approach to intervention development and illustrates its application in India to design an intervention to promote tobacco-use cessation among school personnel in Bihar. We employed a five-step approach to develop the intervention using the Social Contextual Model of Health Behavior Change (SCM) in Bihar, which involved conducting formative research, classifying factors in the social environment as mediating mechanisms and modifying conditions, developing a creative brief, designing an intervention and refining the intervention based on pilot test results. The intervention engages users and non-users of tobacco, involves teachers in implementing and monitoring school tobacco control policies and maximizes teachers’ role as change agents in schools and communities. Intervention components include health educator visits, discussions led by lead teachers, cessation assistance, posters and other educational materials.
and is implemented over the entire academic year. The intervention is being tested in Bihar government schools as part of a randomized-controlled trial. SCM was a useful framework for developing a tobacco control intervention that responded to teachers' lives in Bihar.

PMID: 22669010 [PubMed - indexed for MEDLINE] PMCID: PMC3549584


Abstract

BACKGROUND: Tobacco usage is addictive and causative for several diseases and premature death. Concerted efforts by the individual and society are needed for control and for surveillance. The habit is initiated during early youth and this age group requires constant monitoring and timely appropriate action to curtail usage. The WHO FCTC has recommended actions to monitor and limit the tobacco use in young age groups. One of the actions is to examine the prevalence of tobacco habits in school children 13-15 years of age and of personnel employed in schools.

METHODS: WHO & CDC designed the study systems for Global Youth Tobacco Survey (GYTS) and Global School Personnel Survey (GSPS). In 2006 we conducted GYTS and GSPS in several parts of the country. The schools were chosen by strict sampling procedure and a well structured, self-administered questionnaire was used to obtain information on tobacco usage from 13 to 15 year old students of chosen schools and personnel of these schools.

RESULTS: Current use of any tobacco product was 14.1% among students (17.3% boys, 9.8% girls) and among school personnel it was 29.2 % (35.0% males and 13.7% females). The prevalence was highest among male students in North East (34%) and the lowest was 4.9% among female students of western states. Cigarettes and Bidi smoking were more prevalent among boys. Smokeless tobacco use prevalence rate varied between 20% and 4.5% among boys and between 21.5% and 1.6% among girl students. Among male school personnel, the prevalence varied from 57.9% in NE to 25.7% in South. Among females 26.5% were tobacco users in the NE and in Western region it was 6.6%.

CONCLUSION: It is essential to adopt forceful strategies, which are area specific, in order to undo the harm inflicted by tobacco use upon the individuals &society. Periodic surveys for surveillance of trends are essential to evaluate the outcome of programmes among students and school personnels.

PMID: 18159980 [PubMed - indexed for MEDLINE]


Abstract

School personnel are role models for students, teachers of tobacco use prevention curricula, and key influencers for tobacco control policies in schools. With their daily interactions and strong influence on their students they represent an influential group for tobacco control. Data collected through the Global School Personnel Survey during 2006 in 180 school; of 6 regions of India have shown that a large proportion (29%) of school personnel used tobacco. The scarcity of tobacco free school policies and relevant teaching materials (non existent in 62% of schools surveyed) and lack of training among school personnel (84%) reported in this study indicate the extent of undermining the scope of prevention efforts in schools to reduce adolescent tobacco use prevalence in India. Majority of school personnel in India strongly agreed that they should receive specific training to help students avoid or stop using tobacco. Training of school personnel along with introduction of comprehensive school policies and its vigorous enforcement will help adolescent students and school personnel to adopt and maintain a tobacco free lifestyle.

PMID: 18240470 [PubMed - indexed for MEDLINE]
Abstract

BACKGROUND: This paper uses qualitative data to explore differences in tobacco use patterns and tobacco use prevention efforts among teachers in two Indian states with high versus low prevalence of tobacco use.

METHODS: We conducted a series of 12 focus groups with teachers in 12 schools in Maharashtra and Bihar following a standardized script, and analyzed data using standard qualitative methods.

RESULTS: Teachers in Bihar reported higher levels of tobacco use and stronger social norms promoting tobacco use compared to those in Maharashtra; nonetheless, teachers in both states reported strong social prescriptions about teachers’ not using tobacco. Few supports were available for cessation. Although focus group participants were generally aware that tobacco use has deleterious health effects, not all were knowledgeable of specific health consequences, in particular resulting from the use of smokeless tobacco. Key barriers to teaching about tobacco use prevention were reported, including the lack of its inclusion in standard curricula and large class sizes; these results also underscore the importance of support for tobacco control policies.

CONCLUSIONS: These findings point to the need for a multi-pronged approach to tobacco use prevention that involves the government, school administration, as well as teachers, parents, and the broader community, and including support to tobacco use cessation.

PMID: 15917037 [PubMed - indexed for MEDLINE]


Abstract

Teachers and administrators are role models for students, conveyors of tobacco prevention curricula, and key opinion leaders for school tobacco control policies. School teachers and administrators have daily interaction with students and thus represent an influential group for tobacco control. Data collected by the Global School Personnel Survey between 2000 and 2005 have shown that an alarming proportion of school personnel smoke cigarettes and use other forms of tobacco. At the regional level, current cigarette smoking is between 15% and 19% among school personnel included in this report around the world. The scarcity of tobacco-free schools and the high level of smoking on school grounds by school personnel reported in this study indicate how seriously school practice and staff actions undermine the educational messages and other prevention efforts to reduce adolescent smoking prevalence. However, the majority of school personnel in most sites strongly agreed that they should receive specific training to help students avoid or stop using tobacco.

PMID: 16731521 [PubMed - indexed for MEDLINE] PMCID: PMC2563538


Erratum in


Abstract

Information about tobacco use prevalence, knowledge and attitude was assessed among school personnel in Uttar Pradesh. A single cluster sample design with probability proportional to the enrolment in grades 8-10 was used. Statistical analysis was done using SUDAAN and the C-sample procedure in Epi Info. The school response rate was 100%. School personnel response rate ranged from 72-80%, the proportion of men being 84-92%.
Current cigarette smoking and smokeless tobacco use reported by all teachers was 21.9% and 75.6% respectively. The prevalence of daily cigarette smoking was ranged by 12.6-15.1%; bidi and other smoking 4.8-13.4%; smokeless tobacco use 16.3-19.8%. Existing school policy on four measures were reported poor however over 72% school personnel felt need for policy prohibiting tobacco use among students and school personnel. Tobacco prevention instruction by teachers did not fare much better on six different measures (4.9-30.9%). However over 2/3rd school personnel were very supportive on tobacco control issues. There was no training among school personnel on tobacco use prevention skills (3.7%). However most of the school personnel (67.1%) were curious about getting such trainings. A positive environment for tobacco use prevention needs to be created by adopting comprehensive tobacco control policies for schools. First step towards this may be training of school personnel on tobacco use prevention skill and supply of teaching materials.

PMID: 15709600 [PubMed - indexed for MEDLINE]


Abstract

Tobacco use prevalence, knowledge and attitude was assessed among school personnel in Orissa. A single cluster sample design with probability proportional to the enrolment in grades VIII-X was used. Statistical analysis was done using SUDAAN and the C-sample procedure in Epi Info. The school response rate was 100%. Over 72% of school personals participated in the survey, the proportion of men being 84%. Current cigarette smoking, bidi smoking and smokeless tobacco use was reported by 26.8%, 30.1% and 38.8% school personnel respectively. Current daily cigarette smoking, bidi smoking and smokeless tobacco use reported by 18.3%, 16.6% and 24.2% school personnel respectively. Men reported significantly more all kinds of daily tobacco use as compared to women. School tobacco control policy on three scales was reported poor (25-39%). However most of the school personnel felt need for such policies (88-98%). Teaching and training on tobacco was reported low (22.7%-35.9%). Most of the school personnel (67-95%) were supportive on different measures on tobacco control issues. Introduction of comprehensive school policies and enforcement on tobacco use may help to reduce adolescent and school personnel tobacco use.

PMID: 15709598 [PubMed - indexed for MEDLINE]


Abstract

This study examined the relationship between school tobacco policies and tobacco use prevalence among school personnel. Two subsets of schools were identified in Bihar, India: Federal Schools (with a tobacco policy), and State schools (without a tobacco policy). Stratified probability samples of 50 schools each were selected. The survey was conducted through an anonymous, self-administered questionnaire. School personnel from State Schools (non-policy schools) reported significantly higher daily cigarette smoking and daily current smokeless tobacco use compared to personnel in Federal schools (policy schools). Teachers in State schools did not teach about health consequences of tobacco, and they had not received training for such teaching. Extent of teaching about health consequences of tobacco varied across topics for teachers in Federal schools. They received negligible training, but more than 35% reported access to teaching materials. More than one-half the personnel from Federal schools knew about their school's policy prohibiting tobacco use among students and school personnel, and about policy enforcement. Personnel in State schools did not know about tobacco control policy in their schools. All school personnel in both types of schools were near unanimous in supporting policy prohibiting tobacco use in schools. The study demonstrated an association between enacting a school policy regarding tobacco use and school personnel's use of tobacco, curricular teaching, and practical training of students. Findings suggest that more extensive introduction of comprehensive school policies may help reduce tobacco use among school personnel.

PMID: 15022368 [PubMed - indexed for MEDLINE]

Abstract

AIMS: To obtain baseline information about tobacco use prevalence, knowledge and attitude among school personnel in Eight North-eastern states of India (Assam, Arunachal Pradesh, Manipur, Meghalaya, Mizoram, Nagaland, Sikkim, and Tripura).

MATERIAL AND METHODS: A sample of schools with probability proportional to the enrolment in grades 8-10. Anonymous self-administered questionnaire was used for all personnel working in the selected schools.

RESULTS: The school response rate was 100% in all states except Meghalaya (96%) and Tripura (92%). Over 70% of school personals participated in the survey, the proportion of men being 56% (Meghalaya) to 83% (Assam). The prevalence of daily smoking ranged from 25.9% (Mizoram) to 12.8% (Arunachal Pradesh) and of smokeless tobacco use from 57.8% (Mizoram) to 10.7% (Assam). Daily smoking among men and women was similar in five states but not in Arunachal Pradesh (men 15.0%, women 4.0%), Nagaland (men 18.7%, 5.0%), and Tripura (men 18.6%, women 0.4%). In four states cigarette was the most prevalent form of smoking (range 41% to 55%) whereas in other four states it was bidi (range 34% to 53%). Although the number of women was small, cigarettes smoking was reported more among women than men in four states: Assam, Arunachal Pradesh, Manipur, and Nagaland. Over 50% of current smokeless tobacco users reported using betel quid in six states, except Mizoram (20%) and Sikkim (16%).

CONCLUSION: Tobacco use among school personnel was high. High smoking rates reported by women were unexpected.


No abstract available

PMID: 11891376[PubMed - indexed for MEDLINE] PMCID:

1.4.1. Global School Personnel Survey (GSPS)


Abstract

BACKGROUND: The results of the Global School Personnel Survey (GSPS) conducted in India in 2009 are compared with 2006 GSPS to assess any change in 2009 on tobacco use and knowledge and attitudes to tobacco use, training and availability of tobacco control teaching material in schools and the existence of school tobacco control policies.

METHODS: GSPS is a cross sectional survey conducted twice (2006 and 2009) in entire India. A total of 180 schools were surveyed each time.

RESULTS: Of the participating school personnel, 2660 in 2006 and 2575 in 2009, about 95% were teachers and the balance administrators. In 2009, compared to 2006 the prevalence of current smoking of cigarettes (19.6% in 2006 and 10.3% in 2009) and bidis (21.5% in 2006 and 13.9% in 2009) was found to be significantly lower; the percentage of teachers receiving training on preventing youth tobacco use has significantly reduced (16.7% in 2006 and 10.1% in 2009); access of teachers to educational materials on tobacco use and how to prevent its use among youth had not increased (34.6% in 2006 and 37.8% in 2009); there was no change in policy prohibiting tobacco use among students and school personnel; however, ever use of any tobacco on school premises was significantly lower (15.6% in 2006 and 9.6% in 2009).

CONCLUSIONS: The prevalence of current smoking (cigarettes/bidis) among school personnel and use of any tobacco on school premises were significantly decreased in 2009 as compared to 2006. Necessary action should be planned to increase the number of teachers trained and the availability of teaching materials on preventing youth tobacco use in order to have effective prevention of tobacco use among students.

Abstract

BACKGROUND: Tobacco usage is addictive and causative for several diseases and premature death. Concerted efforts by the individual and society are needed for control and for surveillance. The habit is initiated during early youth and this age group requires constant monitoring and timely appropriate action to curtail usage. The WHO FCTC has recommended actions to monitor and limit the tobacco use in young age groups. One of the actions is to examine the prevalence of tobacco habits in school children 13-15 years of age and of personnel employed in schools.

METHODS: WHO & CDC designed the study systems for Global Youth Tobacco Survey (GYTS) and Global School Personnel Survey (GSPS). In 2006 we conducted GYTS and GSPS in several parts of the country. The schools were chosen by strict sampling procedure and a well structured, self-administered questionnaire was used to obtain information on tobacco usage from 13 to 15 year old students of chosen schools and personnel of these schools.

RESULTS: Current use of any tobacco product was 14.1% among students (17.3% boys, 9.8% girls) and among school personnel it was 29.2% (35.0% males and 13.7% females). The prevalence was highest among male students in North East (34%) and the lowest was 4.9% among female students of western states. Cigarettes and bidi smoking were more prevalent among boys. Smokeless tobacco use prevalence rate varied between 20% and 4.5% among boys and between 21.5% and 1.6% among girl students. Among male school personnel, the prevalence varied from 57.9% in NE to 25.7% in South. Among females 26.5% were tobacco users in the NE and in Western region it was 6.6%.

CONCLUSION: It is essential to adopt forceful strategies, which are area specific, in order to undo the harm inflicted by tobacco use upon the individuals & society. Periodic surveys for surveillance of trends are essential to evaluate the outcome of programmes among students and school personnel.

PMID: 18159980 [PubMed - indexed for MEDLINE]


Abstract

BACKGROUND: This paper compares tobacco use patterns and tobacco use prevention efforts among teachers in two Indian states with high versus low prevalence of tobacco use.

METHODS: Data from the Global School Personnel Survey compared tobacco use patterns and tobacco use prevention activities among teachers from the Indian states of Maharashtra (N = 954) and Bihar (N = 524).

RESULTS: 78% of teachers in Bihar and 31% from Maharashtra were current tobacco users. Tobacco control policies were virtually non-existent in schools in Bihar, while in Maharashtra, over one-fourth of teachers reported that tobacco use was prohibited among both students and teachers. Few teachers in Bihar taught their students about tobacco use prevention, while such teaching was more common in Maharashtra. In Maharashtra, teaching about tobacco use prevention was significantly associated with not currently using tobacco (P < 0.0001), having a policy specifically prohibiting tobacco use among students (P < 0.0001), and having a policy specifically prohibiting tobacco use among school personnel (P < 0.0001).
CONCLUSIONS: This study has clear implications for implementation of tobacco control policies in Indian schools and further underscores the need for infrastructure support for tobacco use prevention in developing countries such as India, where tobacco use threatens to contribute to a growing proportion of the burden of disease worldwide.

PMID: 15917036 [PubMed - indexed for MEDLINE]

1.5. Rural communities


Abstract:

BACKGROUND: Tobacco usage is widely prevalent in both the developed and developing countries. It is one of the important preventable causes of premature death in developing countries. It has been estimated that nearly 50% of men are dependent on some form of tobacco use.

MATERIALS AND METHODS: The aim of the study was to find out the prevalence of tobacco usage among the adult male population in rural areas. The objectives were to find out the tobacco usage in various forms and the impact of pictorial warnings on the packing to quit tobacco. A cross sectional observational study was conducted in Pedaparimi village of Guntur district, Andhra Pradesh, Rural Field Practice area of NRI Medical College, Guntur for 3 months (from January to March 2014). Ten percent of the houses were studied using systematic random sampling method. The data was collected from 105 adult male respondents residing in the village.

RESULTS: 71.4% of the respondents ever used tobacco, of them nearly 61% are current users, and 28.6% never used tobacco in any form. Smoking by far was the popular method of tobacco intake (96%); cigarette smoking was popular among 38.7% of the respondents, followed by cigar (32.0%) and bidi (25.3%). Nearly two-thirds (67.2%) of the current tobacco users attempted to quit tobacco previously and failed 51.4% were aware regarding the ill effects of exposure to second hand smoke. 29.5% of the respondents were not aware of the pictorial warnings depicted on the various tobacco products.

CONCLUSION: There is high prevalence of tobacco use in the present study village as like in any other villages in the country. There should be a national effort to prevent any further increase in the prevalence of tobacco use, especially among the vulnerable groups. Changes in the pictorial warnings depicted on the tobacco products to have an effect on awareness of the diseases caused and cessation of the use is needed.
Tobacco use is common in India and a majority of users are in rural areas. We examine tobacco use and smoking quit rates along gender and socioeconomic dimensions in rural Andhra Pradesh.

**METHODS:** Data come from a cross-sectional survey. Markers of socioeconomic status (SES) were education, occupation, and income. Regression analyses were undertaken to examine determinants of current smoking, smoking quit rates, tobacco use by type (cigarettes, bidis, and chewing), and quantity consumed (number per day, pack-years).

**RESULTS:** The weighted prevalence of current smoking and tobacco chewing was higher in men (50.3%, 95% confidence interval, CI, 48.1-52.6 and 5.0%, 95% CI 4.1-5.9, respectively) compared with women (4.8%, 95% CI 3.9-5.7 and 1.0%, 95% CI 0.6-1.4, respectively) and higher among older age groups. The quit rate was higher in women (45.5%, 95% CI 38.7-52.2) compared to men (18.8%, 95% CI 16.7-20.9). Illiterate individuals were more likely to be current smokers of any type compared to those with secondary/higher education (odds ratio, OR, 3.25, 95% CI 2.54-4.16), although cigarette smoking was higher in men of high SES. Smoking quit rates were positively associated with SES (OR 2.56, 95% CI 1.76-3.71) for secondary/higher education vs. illiterates. Level of consumption increased with SES and those with secondary/higher education smoked an additional 1.93 (95% CI 1.08-2.77) cigarettes or bidis per day and had an additional 1.87 (95% CI 0.57-3.17) pack-years vs. illiterates.

**CONCLUSIONS:** The social gradients in cigarette smoking and level of consumption contrasted those for indigenous forms of tobacco ( bidi smoking and chewing). International prevention and cessation initiatives designed at modifying Western-style cigarette usage will need to be tailored to the social context of rural Andhra Pradesh to effectively influence the use of cigarettes and equally harmful indigenous forms of tobacco.

**PMID:** 23723329 [PubMed - in process]


**Abstract**

**BACKGROUND:** The authenticity and true status of tobacco use, especially in the form of smoking among the patient clientele is always of concern for their physicians.

**OBJECTIVES:** The purpose of this study was to assess the authenticity of self-reported habit of tobacco smoking among a population sample of male respondents in rural India.

**METHODS:** Respondents were asked to complete oral questionnaires that assessed their status of tobacco smoking (if any) as well as duration of tobacco smoking, type of tobacco smoking, and frequency of tobacco smoking. Subsequently, exhaled breath carbon monoxide analysis was performed to detect their amounts of exhaled carbon monoxide.

**RESULTS:** In 175 respondents, the Smoke Check color indicators were significantly different (P < 0.0001) in the respondents who were diagnosed smokers per oral questionnaires (n = 92) versus diagnosed nonsmokers per oral questionnaires (n = 83). The probability statistics of authenticity of oral questionnaires for assessing smoking status showed that self-reporting was only 75% sensitive and 76% specific with 80% positive predictive value and 70% negative predictive value.
CONCLUSION: True status of tobacco smoking with exhaled breath carbon monoxide analysis can be an easy clinical maneuver with community health screening and health promotion implications among patient populations in rural India.

PMID: 25374853 [PubMed] PMCID: PMC4209671


Abstract

BACKGROUND: Tobacco has long been identified as one of the most hazardous risk factors detrimental to health. To plan and implement anti-tobacco activities in any community, it is necessary to understand the risk it poses in that setting. We assessed the risk of mortality associated with tobacco use in a rural community of Kerala.

METHODS: This cohort study (PROLIFE) was done in Varkkala, a rural development block of Thiruvananthapuram district of Kerala. Adults aged 20 years and above were included. Age-adjusted mortality rates were computed for both users and non-users of tobacco. The risk of mortality was plotted using Kaplan-Meier curves. Cox regression was used to compute the age-adjusted hazard ratio of mortality among tobacco users.

RESULTS: More than one-fourth of the study population used tobacco. The age-adjusted mortality rates were higher among tobacco users. The major causes of death among both users and non-users of tobacco were similar. The incidence proportion of death among all causes of death was higher for tobacco users. The hazard of mortality was significantly more among tobacco users, with the age-adjusted hazard ratio being 1.225 (1.140-1.315).

CONCLUSION: The mortality risk due to tobacco use is high irrespective of the cause of death.

PMID: 25403115[PubMed - indexed for MEDLINE]


Abstract

BACKGROUND: Tobacco use leads to many health complications and is a risk factor for the occurrence of cardiovascular diseases, lung and oral cancers, chronic bronchitis etc. Almost 6 million people die from tobacco-related causes every year. This study was conducted to measure the prevalence of tobacco use in three different areas around Chennai city, south India.

METHODS: A survey of 7510 individuals aged >15 years was undertaken covering Chennai city (urban), Ambattur (semi-urban) and Sriperumbudur (rural) taluk. Details on tobacco use were collected using a questionnaire adapted from both Global Youth Tobacco Survey and Global Adults Tobacco Survey.

RESULTS: The overall prevalence of tobacco use was significantly higher in the rural (23.7%) compared to semi-urban (20.9%) and urban (19.4%) areas (P value <0.001) Tobacco smoking prevalence was 14.3%, 13.9% and 12.4% in rural, semi-urban and urban areas respectively. The corresponding values for smokeless tobacco use were 9.5%, 7.0% and 7.0% respectively. Logistic regression analysis showed that the odds of using tobacco (with smoke or smokeless forms) was significantly higher among males, older individuals, alcoholics, in rural areas and slum localities. Behavioural pattern analysis of current tobacco users led to three groups (1) those who were not reached by family or friends to advice on harmful effects (2) those who were well aware of harmful effects of tobacco and even want to quit and (3) those are exposed to second hand/passive smoking at home and outside.
CONCLUSIONS: Tobacco use prevalence was significantly higher in rural areas, slum dwellers, males and older age groups in this region of south India. Women used mainly smokeless tobacco. Tobacco control programmes need to develop strategies to address the different subgroups among tobacco users. Public health facilities need to expand smoking cessation counseling services as well as provide pharmacotherapy where necessary.

PMID: 24098418 [PubMed - indexed for MEDLINE] PMCID: PMC3788037


Abstract

BACKGROUND: In India most of the tobacco cessation centers are concentrating only on urban population, whereas, literature reveals that it is rural population, which shows high frequency of consumption of tobacco. It is well known that high frequency of tobacco consumption is associated with psychological dependence. This study aimed at identifying, which form of tobacco consumption (smoking or smokeless) is associated with psychological dependence and is associated with which particular age group in rural population.

MATERIALS AND METHODS: It was a questionnaire based survey where 200 subjects were enrolled. Revised version of standard Fagerstrom Test for Nicotine dependence (FTND) was given to each subject to answer. The collected data was statistically analyzed by using Karl Pearson Correlation (r) test and Student’s t-test.

RESULTS: Study showed that subjects above 40 years of age are psychologically highly dependent on tobacco smoking as compared to tobacco chewing. Tobacco chewing is more prevalent among the younger population (20-30 years of age) and type of habit does not have any influence over psychological dependence below 40 years of age. A positive correlation was observed between duration of habit and psychological dependence in all age groups irrespective of type of the habit of tobacco consumption.

CONCLUSION: This study attempts at creating a new avenue for the tobacco cessation centers where they can target their efforts towards rural population particularly people above 40 years of age with a tobacco smoking habit so that they can actually reduce the burden of a number of people at risk for developing tobacco associated oral cancer.

PMID: 24130581 [PubMed] PMCID: PMC3793409


Abstract

We analyzed data from a cohort study in rural Kerala, India, to study the incidence of current smoking and current smokeless tobacco use. At baseline, of 452 individuals aged 15 to 64 years, 385 were current nonsmokers and 402 were current nonusers of smokeless tobacco. Over a mean follow-up of 7.1 ± 0.2 years, 5.5% became current smokers and 9.0% became current smokeless tobacco users. Among men, 21.1% (95% confidence interval [CI] = 11.1-36.4) of younger individuals (15-24 years) became current smokers and 22.2% (CI = 10.6-40.8) of older individuals (55-64 years) became current smokeless tobacco users. No women smoked both at baseline and at follow-up, but 9.7% (CI = 3.4-24.9) of older women (55-64 years) became current smokeless tobacco users. These findings call for effective implementation of India’s Cigarettes and Other Tobacco Products Act, 2003.

PMID: 23666836 [PubMed - as supplied by publisher]

Abstract

The study attempted to identify the prevalence and distribution of risk factors of non-communicable diseases among urban and rural population in Gujarat, India. Using the WHO stepwise approach, a cross-sectional study was carried out among 1,805 urban and 1,684 rural people of 15-64 years age-group. Information on behaviour and physiological risk factors of non-communicable diseases was obtained through standardized protocol. High prevalence of smoking (22.8%) and the use of smokeless tobacco (43.4%) were observed among rural men compared to urban men (smoking-12.8% and smokeless tobacco consumption-23.1%). There was a significant difference in the average consumption of fruits and vegetables between urban (2.18 +/- 1.59 servings) and rural (1.78 +/- 1.48 servings) area. Prevalence of overweight and obesity was observed to be high among urban men and women in all age-groups compared to rural men and women. Prevalence of behavioural risk factors, overweight, and obesity increased with age in both the areas. Twenty-nine percent of the urban residents and 15.4% of the rural residents were found to have raised blood pressure, and the difference was found to be statistically significant (p < 0.01). For both men and women, the prevalence of overweight and obesity, hypertension, and lack of physical activities were significantly higher in the urban population while smoking, smokeless tobacco consumption, poor consumption of fruits and vegetables were more prevalent in the rural population. The results highlight the need for interventions and approaches for the prevention of risk factors of non-communicable diseases in rural and urban areas.

PMID: 23617208 [PubMed - indexed for MEDLINE] PMCID: PMC3702362


Abstract

OBJECTIVES: An attempt was made to understand the nicotine dependence of smokers selected for an ongoing smoking cessation intervention programme in rural Kerala, India.

METHODS: Data were collected from resident males in the age group of 18 to 60 years from 4 randomly allocated community development blocks of rural Thiruvananthapuram district (2 intervention and 2 control groups). Trained accredited social health activist workers were utilised to collect data from all groups through face to face interview. Nicotine dependence among participants was assessed by means of the six-item Fagerstrom Test for Nicotine Dependence (FTND) translated into the local language. The internal consistency of FTND was computed using Cronbach's alpha coefficient. Criterion validity (concurrent) was assessed by correlations of nicotine dependence scores with age at initiation of smoking and cumulative smoking volume in pack-years.

RESULTS: Among the 928 smokers identified, 474 subjects were in the intervention area (mean age =44.6 years, SD =9.66 years) and 454 in the control area (mean age= 44.5 years, SD =10.30 years). The overall FTND score among current daily smokers was 5.04 (SD: 5.05). FTND scores in the control and intervention areas were 4.75 (SD: 2.57) and 4.92 (SD: 2.51) respectively. The FTND scores increased with age and decreased with higher literacy and socioeconomic status. The average FTND score was high among smokers using both bidi and cigarettes (mean 6.10, SD 2.17). Internal consistency analysis yielded a Cronbach's alpha coefficient of 0.70 in a subsample of 150 subjects, a moderate result. The association of the scale was strongest, with the number of pack-years smoked (rho = 0.677, p < 0.001).

CONCLUSION: A moderate level of nicotine dependence was observed among smokers in the current study. Tobacco cessation strategies could be made more cost effective and productive if a baseline assessment of nicotine dependence is completed before any intervention.

PMID:22938438[PubMed - indexed for MEDLINE]

Abstract

CONTEXT: Tobacco consumption initiated during the adolescent period is a major contributor to the pathogenesis of fatal diseases in adulthood. Information on tobacco use and awareness regarding tobacco legislation and hazards among adolescents in rural Kerala is limited.

AIMS: To assess the prevalence of tobacco use among adolescent students in a rural district in Kerala state and to understand the extent of awareness about the prominent legislative measures against tobacco and tobacco hazards.

MATERIALS AND METHODS: Data on awareness regarding health hazards due to tobacco use and legislation against tobacco consumption were collected from students of 15 randomly selected high schools in an educational sub-district in Kerala, using a cross-sectional study design. Chi-square and Fisher's exact test statistics were used for statistical analysis.

RESULTS: A total of 1473 students participated in the study, of which 79% were males (mean age 15.4 years, SD 1.5). The overall prevalence of 'current tobacco users' was 8%. A significant association between age and tobacco use was noted among tobacco habitués (P<0.05). Awareness regarding legislation against smoking in public places was more in the higher age-groups (P<0.05). Females were more aware of the 'smoking ban' than males (P<0.05). Our survey of the awareness regarding the hazards associated with tobacco use revealed that 41.5% of the students knew about the link between oral cancer and tobacco, with the awareness being greater among females than among males (64.3% vs 35.4%).

CONCLUSION: The finding that tobacco consumption increases with age is a matter of concern. In addition to their clinical work, dental professionals should also educate the public on the hazards of tobacco and conduct tobacco cessation programmes for adolescent groups to control the tobacco epidemic.

PMID:21891884[PubMed - indexed for MEDLINE]


Abstract

BACKGROUND: Cardiovascular diseases are one of the leading causes of death in India. There is high prevalence of cardiovascular risk factors in urban Tamil Nadu. There are limited data on the prevalence of behavioral risk factors and overweight in rural Tamil Nadu.

AIM: We estimated prevalence of behavioral risk factors, overweight and central obesity in a rural population in Tamil Nadu, India.

SETTING AND DESIGN: We conducted a cross-sectional survey in 11 villages in Kancheepuram/Thiruvallur districts, Tamil Nadu.

MATERIALS AND METHODS: Study population included 10,500 subjects aged 25-64 years. We collected data on behavioral risk factors and anthropometric measurements. Body mass index (BMI) was categorized using the classification recommended for Asians. Central obesity was defined as waist circumference ≥90 cm for men and ≥80 cm for women. We computed proportions for all risk factors and used trend chi-square to examine trend.

RESULTS:

Among the 10,500 subjects, 4927 (47%) were males. Among males, 1852 (37.6%) were current smokers and 3073 (62.4%) were current alcohol users. Among females, 840 (15.1%) were smokeless tobacco users. BMI was ≥23.0 kg/m² for 1618 (32.8%) males and 2126 (38.2%) females. 867 (17.6%) males and 1323 (23.7%) females were centrally obese. Most commonly used edible oil was palm oil followed by sunflower oil and groundnut oil.
CONCLUSION: We observed high prevalence of tobacco use, alcohol use and central obesity in the rural population in Tamil Nadu. There is need for health promotion programs to encourage adoption of healthy lifestyle and policy interventions to create enabling environment.

Comment in

- Chronic disease burden in rural India attributable to diet, obesity, and tobacco use, [J Postgrad Med. 2011]

PMID:21206128[PubMed - indexed for MEDLINE]


Abstract

OBJECTIVES: To investigate the sociodemographic patterning of non-communicable disease risk factors in rural India.

DESIGN: Cross sectional study.

SETTING: About 1600 villages from 18 states in India. Most were from four large states due to a convenience sampling strategy.

PARTICIPANTS: 1983 (31% women) people aged 20-69 years (49% response rate).

MAIN OUTCOME MEASURES: Prevalence of tobacco use, alcohol use, low fruit and vegetable intake, low physical activity, obesity, central adiposity, hypertension, dyslipidaemia, diabetes, and underweight.

RESULTS: Prevalence of most risk factors increased with age. Tobacco and alcohol use, low intake of fruit and vegetables, and underweight were more common in lower socioeconomic positions; whereas obesity, dyslipidaemia, and diabetes (men only) and hypertension (women only) were more prevalent in higher socioeconomic positions. For example, 37% (95% CI 30% to 44%) of men smoked tobacco in the lowest socioeconomic group compared with 15% (12% to 17%) in the highest, while 35% (30% to 40%) of women in the highest socioeconomic group were obese compared with 13% (7% to 19%) in the lowest. The age standardised prevalence of some risk factors was: tobacco use (40% (37% to 42%) men, 4% (3% to 6%) women); low fruit and vegetable intake (69% (66% to 71%) men, 75% (71% to 78%) women); obesity (19% (17% to 21%) men, 28% (24% to 31%) women); dyslipidaemia (33% (31% to 36%) men, 35% (31% to 38%) women); hypertension (20% (18% to 22%) men, 22% (19% to 25%) women); diabetes (6% (5% to 7%) men, 5% (4% to 7%) women); and underweight (21% (19% to 23%) men, 18% (15% to 21%) women). Risk factors were generally more prevalent in south Indians compared with north Indians. For example, the prevalence of dyslipidaemia was 21% (17% to 33%) in north Indian men compared with 33% (29% to 38%) in south Indian men, while the prevalence of obesity was 13% (9% to 17%) in north Indian women compared with 24% (19% to 30%) in south Indian women.

CONCLUSIONS: The prevalence of most risk factors was generally high across a range of sociodemographic groups in this sample of rural villagers in India; in particular, the prevalence of tobacco use in men and obesity in women was striking. However, given the limitations of the study (convenience sampling design and low response rate), cautious interpretation of the results is warranted. These data highlight the need for careful monitoring and control of non-communicable disease risk factors in rural areas of India.

PMID: 20876148[PubMed - indexed for MEDLINE] PMCID: PMC2946988

Abstract

BACKGROUND: Tobacco is the leading cause of mortality globally and in India. The magnitude and the pattern of tobacco consumption are likely to be influenced by the geographical setting and with rapid urbanization in India there is a need to study this differential pattern.

AIM: The aim was to study the rural, urban, and urban-slum differences in patterns of tobacco use.

SETTINGS: The study was conducted in Ballabgarh block, Faridabad district, Haryana, and was a community-based cross-sectional study.

MATERIALS AND METHODS: The study was conducted in years 2003-2004 using the WHO STEPS approach with 7891 participants, approximately equal number of males and females, selected using multistage sampling from urban, urban-slum, and rural strata.

STATISTICAL ANALYSIS: The analysis was done using the SPSS 12.0 statistical package (SPSS Inc., Chicago, IL, USA). Direct standardization to the WHO world standard population was done to and chi-square and ANOVA tests were used for comparison across three study settings.

RESULTS: Self-reported tobacco use among males was as follows: urban 35.2%; urban-slums 48.3%; and rural 52.6% (P value <0.05). Self-reported tobacco use among females was as follows: Urban 3.5%; urban-slums 11.9%; and rural 17.2% (P value <0.05). More males reported daily bidi (tobacco wrapped in temburi ni leaf) smoking (urban 17.8%, urban-slums 36.7%, rural 44.6%) than cigarette use (urban 9.6%, urban-slums 6.3%, rural 2.9%). Females using smoked tobacco were almost exclusively using bids (urban 1.7%, 7.9%, 11% in rural). Daily chewed tobacco use had urban, urban-slum, and rural gradients of 12%, 10.5%, and 6.8% in males respectively. Its use was low in females.

CONCLUSION: The ant tobacco policies of India need to focus on bids in ant tobacco campaigns. The program activities must find ways to reach the rural and urban-slum populations.

PMID: 20922100 [PubMed] PMCID: PMC2940179


PMID: 20860312 [PubMed - indexed for MEDLINE]


Abstract

CONTEXT: This paper describes the follow-up interventions and results of the work place tobacco cessation study.

AIMS: To assess the tobacco quit rates among employees, through self report history, and validate it with rapid urine cotinine test; compare post-intervention KAP regarding tobacco consumption with the pre-intervention responses and assess the tobacco consumption pattern among contract employees and provide assistance to encourage quitting.

SETTINGS AND DESIGN: This is a cohort study implemented in a chemical industry in rural Maharashtra, India.

MATERIALS AND METHODS: All employees (104) were interviewed and screened for oral neoplasia. Active intervention in the form of awareness lectures, focus group discussions and if needed, pharmacotherapy was offered. Medical staff from the industrial medical unit and from a local referral hospital was trained. Awareness programs were arranged for the family members and contract employees.

STATISTICAL ANALYSIS USED: Non-parametric statistical techniques and kappa.
RESULTS: Forty eight per cent employees consumed tobacco. The tobacco quit rates increased with each follow-up intervention session and reached 40% at the end of one year. There was 96% agreement between self report tobacco history and results of rapid urine cotinine test. The post-intervention KAP showed considerable improvement over the pre-intervention KAP. 56% of contract employees used tobacco and 55% among them had oral pre-cancerous lesions.

CONCLUSIONS: A positive atmosphere towards tobacco quitting and positive peer pressure assisting each other in tobacco cessation was remarkably noted on the entire industrial campus. A comprehensive model workplace tobacco cessation program has been established, which can be replicated elsewhere.

PMID: 20442834[PubMed] PMCID: PMC2862448


Abstract

BACKGROUND: The adverse effects of tobacco use on the health of an individual are well known. It is essential to identify factors leading to tobacco use to plan strategies to limit its use. Education is known to influence the prevalence of tobacco use. We aimed to determine the prevalence and patterns of tobacco use in a rural community with a high literacy rate and to examine the socioeconomic and demographic correlates of tobacco consumption in the area.
METHODS:

A cross-sectional survey using personal interviews was carried out on 832 individuals > 15 years of age. The prevalence of current daily use of tobacco was used as the outcome measure. The main analytical methods used were chi-square test and multiple logistic regression analysis.

RESULTS:

The prevalence of tobacco use was 17.5%, being common among older persons, the lower socioeconomic group and those who were less educated. Tobacco was used predominantly in smokeless forms (chewing, snuff or both). The commonest reason cited for initiating tobacco use was to relieve toothache.

CONCLUSIONS: Our findings in this rural community suggest that improvement in the educational and socioeconomic status may lead to a decline in the use of tobacco. Health education to improve dental hygiene may also help to reduce tobacco use in this community as it is predominantly used in the chewing form.

PMID: 19267035[PubMed - indexed for MEDLINE]


Abstract

BACKGROUND: Areca nut is the fourth main psychoactive substance in the world. In India, tobacco is added to the quid and the commercially manufactured nonperishable forms of betel quid (pan masala or gutka) are on the rise in the market.

OBJECTIVE: To find out the prevalence of areca nut among the rural residents of Sriperambudur Taluk.

SETTINGS AND DESIGN: A community-based survey using pre-tested semi-structured questionnaire.

MATERIALS AND METHODS: The survey was conducted in 2 villages and their colonies, which were randomly selected out of 168 villages. Data was collected from 500 residents of the study population. The survey was conducted for a period of 2 months.

STATISTICAL ANALYSIS: SPSS version 10.0.

RESULTS: The study participants were more likely to initiate areca nut use by 22 years of age. As many as 19.8% (n = 99) of the study participants chewed areca nut products, out of whom 11.2% (n = 56) indulged in chewing habit alone (areca nut products). Areca nut use was higher among male study subjects compared to females. The commercial forms of areca nut products (gutka) were the most prevalent ones [47.5% (n = 47) of those who used areca nut] observed in the community. Compared to female participants, male participants were more likely to perceive areca nut use as the most harmful habit draining the community health and wealth.

CONCLUSION: There seems to be an increase in the prevalence of areca nut use. The community also perceives it to be a harmful habit. Therefore, effective interventions should be targeted towards the high-risk subpopulation of the community to decrease the prevalence of areca nut use in rural Tamil Nadu.

Comment in

- Areca nut use in India, [Indian J Med Sci. 2007]
- Areca nut: the hidden Indian ‘gateway’ to future tobacco use and oral cancers among youth, [Indian J Med Sci. 2007]

PMID: 17558096 [PubMed - indexed for MEDLINE]

Abstract

BACKGROUND: Tobacco consumption, either in smokeless form or as smoking, is reported to be responsible for major non-communicable diseases, namely, cardiovascular diseases, chronic obstructive pulmonary diseases and cancers. Whatsoever control strategy is being used, the community participation is of utmost importance, which will depend largely on the level of the knowledge in the community.

AIM: To assess the knowledge and attitude of a rural community towards the harmful effects of tobacco use.

SETTING AND DESIGN: Venganoor Gram Panchayat of Thiruvananthapuram district of Kerala; cross-sectional study.

MATERIALS AND METHODS: Interview schedule was used to collect the information on pre-designed and pre-tested proforma. The information recorded, included the demographic characteristics and socio-economic characteristics. The awareness regarding tobacco use and the attitude towards its non-usage was done, by putting forward, open and closed-ended questions.

STATISTICAL ANALYSIS: Percentages and proportions; t-test; chi-square test.

RESULTS: The present study included 302 (64.7%) females and 165 (35.3%) males. Among the males, 44 (38.5%) were ever smokers. Though 451 (96.6%) of the subjects knew that tobacco use is harmful for health, only 101 (22.5%) of the subjects knew that it causes cardiovascular diseases. Electronic and print media were the common source of such knowledge being reported by 265 (58.7%) and 202 (44.7%) subjects, respectively.

CONCLUSIONS: The subjects were aware about the harmful effects of tobacco use. However, more efforts are needed to make them aware about the role of tobacco smoking and chewing, in causing cardiac problems.

PMID:16864911[PubMed - indexed for MEDLINE]


Abstract

BACKGROUND: Tuibur and hidakphu are watery tobacco products made by passing tobacco smoke through water. These have neither been described in the health literature nor are there any reports of epidemiological studies on these products. We collected information on the use of these products in Mizoram and Manipur.

METHODS: We conducted two surveys. In the first, we spoke to personnel involved in tobacco water manufacturing, marketing and sale. In the second, we carried out a house to house survey of adults on the attitude and behaviour towards the use of tobacco products in 25 randomly selected villages each in Aizawl district of Mizoram and Churchandpur district of Manipur.

RESULTS: About 7% of persons surveyed in Aizawl (872 of 12 185) and Churchandpur (139 of 2137) used tobacco water, which is stored and sold in bottles. It is sipped and retained in the mouth for 5-10 minutes and then spat out. Among tobacco water users, about 90% of users in Churchandpur and about 40% in Aizawl sipped tobacco water more than 5 times a day. The use of other tobacco products in both districts was also high.

CONCLUSION: The use of tobacco water has been a part of the culture of some communities in Mizoram and Manipur for a long time. These communities also have a very high incidence of tobacco use. To discourage the use of such tobacco products, these communities should be educated about the harmful effects of tobacco use on a priority.

PMID: 15638304[PubMed - indexed for MEDLINE]

Abstract

RESEARCH QUESTION: What is the extent of tobacco use in a rural area of Bihar, India.

OBJECTIVE: To study tobacco use in rural area of Bihar.

STUDY DESIGN: Cross-sectional.

SETTING: A rural area in Bihar, India.

PARTICIPANTS: All the residents of Akhta village, Sitamarhi district of Bihar.

STUDY VARIABLES: Tobacco use, age, gender, socio-economic status.

STATISTICAL ANALYSIS: Percentage, chi-square test.

RESULTS: The response rate was 91%. The non-response was due to houses being locked during the period of survey. Among 3566 children (<15 years), smokeless tobacco use was 6.2% and smoking 0.3%. Most smokeless tobacco use was in the form of red toothpowder (77%). Smokeless tobacco use among adults (male 2910; female 2586) was 32.7% (42.6% males, 21.7% females). Khaini (57.1%) among males and tobacco toothpowder (41.3%) among females were the most commonly used smokeless tobacco products. Smoking prevalence was 27.7% (31.6% males, 23.4% females). The most prevalent form (>80%) was bidi smoking both in men and women.

CONCLUSION: Tobacco use among adult residents of Akhta village was quite high. Smoking prevalence among females was high even though smoking by women is considered as taboo in Indian society. Intervention measures need to be urgently explored.

1.6. Urban communities


Abstract

BACKGROUND: The current cross-sectional questionnaire survey was conducted to assess the oral health-related knowledge, attitude and practices among eunuchs (hijras) residing in Bhopal city, Madhya Pradesh, India.

MATERIALS AND METHODS: Based on a convenient non-probability snow ball sampling technique, all the self-identified eunuchs residing in the city of Bhopal who were present at the time of study and who fulfilled the selection criteria were approached. A cross section of the general population was also surveyed. An interviewer-based, predesigned, structured, close-ended 18-item questionnaire that had been designed based on the primary objective of the study was used. All the obtained data were analyzed using software, Statistical Package for Social Science version 20.

RESULTS: According to 188 (86.2%) males, 187 (87.4%) females and 168 (81.2%) eunuchs, good oral health can improve the general health. Most of the study participants including 211 (98.6%) females, 210 (96.3%) males and 205 (99%) eunuchs use either tooth paste or tooth powder to clean their teeth. While, a majority of eunuchs, i.e., 113 (54.6%), were having habit of chewing smokeless tobacco containing products such as betel nut, betel quid, gutka, etc. The difference in use of tobacco products was statistically significant.

CONCLUSION: The information presented in this study adds to our understanding of the common oral hygiene practices which are performed among eunuch population. Efforts to increase the awareness of oral effects of tobacco use and to eliminate the habit are needed to improve oral and general health of this population.

PMID: 25425825 [PubMed] PMCID: PMC4239753

Abstract

BACKGROUND: Tobacco use leads to many health complications and is a risk factor for the occurrence of cardiovascular diseases, lung and oral cancers, chronic bronchitis etc. Almost 6 million people die from tobacco-related causes every year. This study was conducted to measure the prevalence of tobacco use in three different areas around Chennai city, south India.

METHODS: A survey of 7510 individuals aged ≥15 years was undertaken covering Chennai city (urban), Ambattur (semi-urban) and Sriperumbudur (rural) taluk. Details on tobacco use were collected using a questionnaire adapted from both Global Youth Tobacco Survey and Global Adults Tobacco Survey.

RESULTS: The overall prevalence of tobacco use was significantly higher in the rural (23.7%) compared to semi-urban (20.9%) and urban (19.4%) areas (P value <0.001) Tobacco smoking prevalence was 14.3%, 13.9% and 12.4% in rural, semi-urban and urban areas respectively. The corresponding values for smokeless tobacco use were 9.5%, 7.0% and 7.0% respectively. Logistic regression analysis showed that the odds of using tobacco (with smoke or smokeless forms) was significantly higher among males, older individuals, alcoholics, in rural areas and slum localities. Behavioural pattern analysis of current tobacco users led to three groups (1) those who were not reached by family or friends to advice on harmful effects (2) those who were well aware of harmful effects of tobacco and even want to quit and (3) those are exposed to second hand/passive smoking at home and outside.

CONCLUSIONS: Tobacco use prevalence was significantly higher in rural areas, slum dwellers, males and older age groups in this region of south India. Women used mainly smokeless tobacco. Tobacco control programmes need to develop strategies to address the different subgroups among tobacco users. Public health facilities need to expand smoking cessation counseling services as well as provide pharmacotherapy where necessary.

PMID: 24098418 [PubMed - indexed for MEDLINE] PMCID: PMC3788037


Abstract

OBJECTIVE: To evaluate the associated factors in reinitiating the smoking habit among the participants of a smoking cessation program conducted in a tobacco cessation clinic of Manipal University, Manipal.

MATERIALS AND METHODS: This cross-sectional study was conducted among participants of a smoking cessation program who reinitiated smoking habit. A self-administered questionnaire was used that had information on demographic, habit history, knowledge on harmful effects of smoking behavior related to oral cavity and associated factors due to which individual was unable to quit the habit.

RESULTS: A total of 102 males (mean age = 39.91 ± 9.57) constituted the final sample. The results showed that habitual smokers were more likely to be ≥40 years and occasional smokers were all reported to be <93 years (P < 0.001). Cigarette smokers were more likely to be of younger age group while majority of the Bidi and cigarette + Bidi smokers were older adults (P < 0.001). The mean duration of the habit was significantly higher for older adults than young adults (P < 0.001). There was no significant difference in the number of packs between the age groups (P = 0.054). A significantly higher proportion of young adults than older adults were aware about oral cancer (P < 0.001). Significantly higher proportion of older adults than young adults tend to have a closest person to be a smoker (P = 0.05). A significant higher proportion of young adults reason their habit as for pleasure (84.6%) and relaxation (68.8%), while older adults reason it to be as tension (64.1%) or combined factors (70.6%). Peer pressure was almost same in both the age groups (P = 0.006). There were no significant differences in the withdrawal symptoms among young and older adults (P = 0.41).

CONCLUSION: Considerable differences were noticed between younger and older age groups in the factors which might play a role in re-initiating the smoking habit. A structured cessation program focused more on the above characteristics should be planned in public health programs based on the characteristics of the participants.
CONCLUSION:

Peer pressure was almost the same in both age groups (P = 0.006). There were no significant differences in the number of packs between the age groups (P = 0.054). A significantly higher proportion of young adults than older adults were aware of oral cavity and associated factors due to which an individual was unable to quit the habit.

RESULTS:

Tobacco use prevalence was significantly higher in rural areas, slum dwellers, males, and older individuals. Alcoholics, in rural areas, and urban (20.9%) and urban (19.4%) areas (P value <0.001) was observed. Tobacco smoking prevalence was 14.3%, 13.9%, and 12.4% in rural, semi-urban, and urban areas respectively. The corresponding values for smokeless tobacco use were 31.4%, 24.6%, and 17.0% respectively. The overall prevalence of tobacco use was significantly higher in the rural (23.7%) compared to the semi-urban (18.3%) and urban (15.0%) areas.

MATERIALS AND METHODS:

The study attempted to identify the prevalence and distribution of risk factors of non-communicable diseases among urban and rural population in Gujarat, India. Using the WHO stepwise approach, a cross-sectional study was conducted among 1,805 urban and 1,684 rural people of 15-64 years age-group. Information on behavioral and physiological risk factors of non-communicable diseases was obtained through standardized protocol. High prevalence of smoking (22.8%) and the use of smokeless tobacco (43.4%) were observed among rural men compared to urban men (smoking-12.8% and smokeless tobacco consumption-23.1%). There was a significant difference in the average consumption of fruits and vegetables between rural and urban areas. Prevalence of overweight and obesity was observed to be high among urban men and women in all age-groups compared to rural men and women. Prevalence of behavioral risk factors, overweight, and obesity increased with age in both the areas. Twenty-nine percent of the urban residents and 15.4% of the rural residents were found to have raised blood pressure, and the difference was found to be statistically significant (p < 0.01). For both men and women, the prevalence of overweight and obesity, hypertension, and lack of physical activity were significantly higher in the urban population while smoking, smokeless tobacco consumption, poor consumption of fruits and vegetables were more prevalent in the rural population. The results highlight the need for interventions and approaches for the prevention of risk factors of non-communicable diseases in rural and urban areas.
Abstract

BACKGROUND: Self-reported tobacco use among young people can underestimate the actual prevalence of tobacco use. Biochemical validation of self-reports is particularly recommended for intervention studies where cessation outcomes are to be measured. Literature on biochemical validation of self-reports of multiple forms of tobacco use in India is sparse, particularly among young people.

METHODS: The study was conducted during the baseline household survey of a community-based tobacco prevention and cessation intervention trial for youth (10-19 years old) residing in slum communities in Delhi, India in 2009. Salivary cotinine measurement on 1,224 samples showed that youth were under-reporting use of chewing and smoking tobacco.

RESULTS: Self-reports had a low sensitivity (36.3%) and a positive predictive value of 72.6%. No statistically significant difference in under-reporting was found between youth in the control and intervention conditions of the trial, which will be taken into consideration in assessing intervention outcomes at a later time point.

CONCLUSION: Biochemical validation of self-reported tobacco use should be considered during prevention and cessation studies among youth living in low-income settings in developing countries like India.

IMPACT: The future results of biochemical validation from Project ACTIVITY (Advancing Cessation of Tobacco in Vulnerable Indian Tobacco Consuming Youth) will be useful to design validation studies in resource-poor settings.

PMID: 22320954 [PubMed - indexed for MEDLINE] PMCID: PMC3310162


Abstract

Tobacco consumption in multiple forms presents an emerging, significant and growing threat to the health of Indian adolescents, especially those from low socio-economic communities. Research in two phases was undertaken among economically disadvantaged adolescents in two urban slums of Delhi. In phase I, qualitative research methods such as focus group discussions and in-depth interviews were used to explore and understand the determinants influencing tobacco use among these adolescents. Prevalence of tobacco use was higher among boys than girls. Adolescents reported using tobacco in multiple forms, chewing tobacco being the most popular. Peer pressure, easy availability and affordability were important reasons associated with tobacco initiation and continued use. Though they had some knowledge about the harmful effects of tobacco, this was not sufficient to motivate them to abstain or quit. The community-based intervention model developed on the basis of the results of phase I was evaluated in phase II in a demonstration study with two slum communities. One was treated as the intervention and the other as control. A significant difference in current use of tobacco was observed between the study groups (p = 0.048), with the intervention group showing a reduction in use, compared with an increase in use among the control group. Post-intervention, the intervention group reported significantly lower fresh uptake (0.3%) of tobacco use compared with the control group (1.7%). No significant change was found for quit rate (p = 0.282) in the two groups. Community-based interventions can be effective in preventing adolescents from initiating tobacco use in a low-resource setting such as India.

PMID: 20190265 [PubMed - indexed for MEDLINE]


Abstract

BACKGROUND: Tobacco is the leading cause of mortality globally and in India. The magnitude and the pattern of tobacco consumption are likely to be influenced by the geographical setting and with rapid urbanization in India there is a need to study this differential pattern.
AIM: The aim was to study the rural, urban, and urban-slum differences in patterns of tobacco use.

SETTINGS: The study was conducted in Ballabgarh block, Faridabad district, Haryana, and was a community-based cross-sectional study.

MATERIALS AND METHODS: The study was conducted in years 2003-2004 using the WHO STEPS approach with 7891 participants, approximately equal number of males and females, selected using multistage sampling from urban, urban-slum, and rural strata.

STATISTICAL ANALYSIS: The analysis was done using the SPSS 12.0 statistical package (SPSS Inc., Chicago, IL, USA). Direct standardization to the WHO world standard population was done to and chi-square and ANOVA tests were used for comparison across three study settings.

RESULTS: Self-reported tobacco use among males was as follows: urban 35.2%; urban-slums 48.3%; and rural 52.6% (P value <0.05). Self-reported tobacco use among females was as follows: Urban 3.5%; urban-slums 11.9%; and rural 17.7% (P value <0.05). More males reported daily bidi (tobacco wrapped in temburini leaf) smoking (urban 17.8%, urban-slums 36.7%, rural 44.6%) than cigarette use (urban 9.6%, urban-slums 6.3%, rural 2.9%). Females using smoked tobacco were almost exclusively using bids (urban 1.7%, 7.9%, 11% in rural). Daily chewed tobacco use had urban, urban-slum, and rural gradients of 12%, 10.5%, and 6.8% in males respectively. Its use was low in females.

CONCLUSION: The ant tobacco policies of India need to focus on bids in ant tobacco campaigns. The program activities must find ways to reach the rural and urban-slum populations.

PMID: 20922100 [PubMed] PMCID: PMC2940179


Abstract

BACKGROUND: Awareness towards tobacco hazards has increased with time but its role alone towards cessation is questionable. With widespread menace of tobacco in developing countries like India, not much tobacco chewing prevalence and their quitting patterns data are available in urban Saurashtra region.

OBJECTIVES: 1. To find out prevalence of various forms of chewing tobacco and quitting attitudes in urban Jamnagar. 2. To study quitting patterns in relation with age of habit initiation, family background and habit duration.

MATERIALS AND METHODS: It was a cross-sectional study involving 2513 individuals as study population by 30-cluster sampling method. The study was carried out between June 2007 and March 2008. Pre-set, pre-tested questionnaire was used for interview purpose and the statistical analysis was done on proportion basis.

RESULTS: About 37.2% of study population was ever-tobacco chewers; 32.9% of them were current-chewers and 4.3% were quitters. Approximately 28.4% of current-consumers were willing to quit. Mawa-masala (63.7%) and Gutka (57.6%) were preferred forms of chewing tobacco and 57.5% of the current-chewers chewed tobacco six to eight times a day. Tobacco initiation age between 20 and 30 years was commoner among quitters (84.2%), while a little younger in current-consumers (76.5%). About 58.3% quitters and 74.0% chewers showing willingness to quit had not consumed tobacco for more than five years, 63.8% of current-chewers had a family member consuming tobacco. With initiation of health problems, 72.2% subjects quit and 55.5% of them already knew about health hazards.

CONCLUSIONS: Every 4 out of 10 residents was found to be exposed to chewing tobacco. With Mawa-masala and Gutka being the predominant forms, habit onset in late adolescence, years of consumption and family exposure seem to be hampering quitting. Awareness about tobacco hazards alone does not appear to be resulting in successful quitting.

PMID: 20606932 [PubMed] PMCID: PMC2888336
India


Abstract

INTRODUCTION: This study examined the distribution of psychosocial risk factors and prevalence of tobacco use among youth in urban India by gender.

METHODS: Data were obtained from a cross-sectional baseline survey of a group-randomized tobacco intervention trial involving 6th and 8th graders from 32 schools in Delhi and Chennai (N = 11,642). Mixed-effects regression models were used to examine differences in the prevalence of tobacco use by gender, to determine how the relationship between current tobacco use and related psychosocial risk factors varied by gender, to compare the distribution of risk factors by gender, and to determine if any of these relationships varied by grade level or school type.

RESULTS: 14.7% of girls and 21.1% of boys reported ever-use of tobacco. The psychosocial risk profile for tobacco use was remarkably similar for boys and girls, though some differences were apparent. For example, exposure to advertising and beliefs about social effects of use were significant risk factors for girls but not for boys. Across the board, girls showed lower risk for all psychosocial risk factors, except for perceived prevalence of chewing and smoking, for which girls had higher risk compared with boys.

DISCUSSION: While the psychosocial risk profile for boys suggests a more vulnerable population for tobacco use, the closing gap in tobacco use between boys and girls indicates a need to examine possible differences in psychosocial risk factors. This study reports that there are subtle, but important, differences in risk factors between genders, having implications for gender-specific intervention development.

PMID: 20008025 [PubMed - indexed for MEDLINE]


Abstract

This study documented the tobacco use among male diabetes patients in a clinic-based population of urban India, patient reports of physician cessation messages and patients' perception of tobacco use as a risk factor for diabetes complications. All the 444 male diabetes patients who attended three public sector hospitals in Thiruvananthapuram district, Kerala, were surveyed to ascertain their tobacco use as well as the frequency and content of quit messages received from health staff. A significant proportion (59%) of diabetes patients were tobacco users prior to diagnosis and more than half of them continued to use tobacco, many daily, even after diagnosis. Of the 100 current smokers, 75% were asked about their tobacco use at the time of diagnosis; of those, 52% were advised to quit. However, a lack of patient awareness existed regarding the linkages of smoking and diabetes complications. Notably, 52% of patients did not associate smoking with diabetes complications. Given the magnitude of tobacco use among diabetics, there is clearly a need for more proactive cessation efforts. The times of illness diagnosis, illness flare-ups and emerging illness complications are teachable moments when patients are primed to change their behavior and more motivated to quit tobacco.

PMID:19332439[PubMed - indexed for MEDLINE] PMCID:PMC2738957


Abstract

OBJECTIVE: To investigate why urban Indian 6th graders may be using more tobacco than urban Indian 8th graders.

DESIGN: Cross-sectional survey of students conducted in the summer of 2004, as the baseline evaluation tool for a group-randomised tobacco prevention intervention trial (Project MYTRI). Mixed-effects regression models
were used to (1) examine the relationship between 15 psychosocial risk factors and current use of any tobacco, by grade; and (2) examine differences in psychosocial risk factors, by grade.

**SETTING:** Thirty-two private (high socioeconomic status (SES)) and government (low-mid SES) schools in two large cities in India (Delhi and Chennai).

**SUBJECTS:** Students in the 6th and 8th grade in these schools (n = 11642). Among these, 50.6% resided in Delhi (v Chennai), 61.4% attended a government school (v a private school), 52.9% were enrolled in 6th grade (v 8th), and 54.9% were male (v female).

**MAIN OUTCOME MEASURE:** Current (past 30 day) use of any tobacco, including chewing tobacco (for example, gutka), bidis, or cigarettes.

**RESULT:** Almost all psychosocial factors were significantly related to tobacco use, for students in both grades. Some of the strongest correlates included social susceptibility to and social norms about use. Exposure to tobacco advertising was a strong correlate of tobacco use for 6th graders, but not for 8th graders. Sixth graders scored lower than 8th graders on almost all factors, indicating higher risk.

**CONCLUSIONS:** The "risk profile" of 6th graders suggests they would be vulnerable to use and to begin using tobacco, as well as to outside influences that may encourage use.

PMID: 16723678 [PubMed - indexed for MEDLINE] PMCID: PMC2563548

**Pednekar MS, Gupta PC, Shukla HC, Hebert JR.** Association between tobacco use and body mass index in urban Indian population: implications for public health in India. **BMC Public Health.** 2006 Mar 16; 6:70.

**Abstract**

**BACKGROUND:** Body mass index [BMI, weight (kg)/height (m2)], a measure of relative weight, is a good overall indicator of nutritional status and predictor of overall health. As in many developing countries, the high prevalence of very low BMIs in India represents an important public health risk. Tobacco, smoked in the form of cigarettes or bidis (handmade by rolling a dried rectangular piece of temburni leaf with 0.15-0.25 g of tobacco) or chewed, is another important determinant of health. Tobacco use also may exert a strong influence on BMI.

**METHODS:** The relationship between very low BMI (< 18.5 kg/m2) and tobacco use was examined using data from a representative cross-sectional survey of 99,598 adults (40,071 men and 59,527 women) carried out in the city of Mumbai (formerly known as Bombay) in western India. Participants were men and women aged > or = 35 years who were residents of the main city of Mumbai.

**RESULTS:** All forms of tobacco use were associated with low BMI. The prevalence of low BMI was highest in bidi-smokers (32% compared to 13% in non-users). For smokers, the adjusted odds ratio (OR) and 95% confidence interval (CI) were OR = 1.80(1.65 to 1.96) for men and OR = 1.59(1.09 to 2.32) for women, respectively, relative to non-users. For smokeless tobacco and mixed habits (smoking and smokeless tobacco), OR = 1.28(1.19 to 1.38) and OR = 1.83(1.67 to 2.00) for men and OR = 1.50(1.43 to 1.59) and OR = 2.19(1.90 to 3.41) for women, respectively.

**CONCLUSION:** Tobacco use appears to be an independent risk factor for low BMI in this population. We conclude that in such populations tobacco control research and interventions will need to be conducted in concert with nutrition research and interventions in order to improve the overall health status of the population.

PMID: 16542418[PubMed - indexed for MEDLINE] PMCID: PMC1459138


An annotated bibliography of scientific studies done on tobacco topic in WHO South-East Asia Region countries 133
Abstract

BACKGROUND: The epidemic of tobacco use is shifting from developed to developing countries, including India, where increased use is expected to result in a large disease burden in the future. Changes in prevalence of tobacco use in adolescents are important to monitor, since increased use by young people might be a precursor to increased rates in the population.

METHODS: 11,642 students in the sixth and eighth grades in 32 schools in Delhi and Chennai, India, were surveyed about their tobacco use and psychosocial factors related to onset of tobacco use. Schools were representative of the range of types of school in these cities.

RESULTS: Students who were in government schools, male, older, and in sixth grade were more likely to use tobacco than students who were in private schools, female, younger, and in eighth grade. Students in sixth grade were, overall, two to four times more likely to use tobacco than those in eighth grade. 24.8% (1529 of 6165) of sixth-grade students and 9.3% (509 of 5477) of eighth-grade students had ever used tobacco; 6.7% (413 of 6165) and 2.9% (159 of 5477), respectively, were current users. Psychosocial risk factors were greater in sixth-grade than in eighth-grade students. The increase in tobacco use by age within each grade was larger in sixth grade than in eighth grade in government schools, with older sixth-grade students at especially high risk.

DISCUSSION: The finding that sixth-grade students use significantly more tobacco than eighth-grade students is unusual, and might indicate a new wave of increased tobacco use in urban India that warrants confirmation and early intervention.

PMID: 16488802 [PubMed - indexed for MEDLINE]

1.7. Women


Abstract

BACKGROUND: Globally tobacco epidemic kills nearly six million people annually. Consumption of tobacco products is on the rise in low- and middle-income countries. Tobacco is addictive; hence, tobacco users need support in quitting.

AIMS: Providing tobacco cessation services to women in community enabling them to quit tobacco, identifying factors associated with quitting and documenting the processes involved to establish a replicable "model tobacco cessation program."

SETTINGS AND DESIGN: This is a community based tobacco cessation program of one year duration conducted among women in a low socioeconomic area of Mumbai, India.

SUBJECTS AND METHODS: It involved three interventions conducted at three months interval, comprised of health education, games and counseling sessions and a post intervention follow-up.

STATISTICAL ANALYSIS: Uni and multivariate analysis was performed to find out association of various factors with quitting tobacco.

RESULTS: The average compliance in three intervention rounds was 95.2%. The mean age at initiation of tobacco was 17.3 years. Tobacco use among family members and in the community was primary reasons for initiation and addiction to tobacco was an important factor for continuation, whereas health education and counseling seemed to be largely responsible for quitting. The quit rate at the end of the programme was 33.5%. Multivariate logistic regression analysis found that women in higher age groups and women consuming tobacco at multiple locations are less likely to quit tobacco.

CONCLUSIONS: Changing cultural norms associated with smokeless tobacco, strict implementation of ant tobacco laws in the community and work places and providing cessation support are important measures in preventing initiation and continuation of tobacco use among women in India.

PMID: 25526250 [PubMed - in process]

**Abstract**

**BACKGROUND:** Tobacco is a leading risk factor for different types of diseases globally. Tobacco smoking by women is culturally unacceptable in India, but still women smoke tobacco at various times of their life.

**AIMS:** The aim was to estimate the prevalence and pattern of tobacco use among women and to study the associated sociodemographic factors.

**SETTINGS AND DESIGN:** This cross-sectional study was conducted among women aged 30 years or over in an urban resettlement colony for the migrant population at Chandigarh, India.

**METHODOLOGY:** The study included women used tobacco products on one or more days within the past 30 days. Through systematic random sampling, 262 women were studied. As a part of the study 144 bidi smoking women were interviewed using detailed semi-structured questionnaire.

**STATISTICAL ANALYSIS:** Descriptive statistics and hypothesis testing with Chi-squared test and logistic regression were done using SPSS 16.0 version.

**RESULTS:** Overall, the prevalence of tobacco use was 29.4% and that of bidi, zarda and hookah were 19.8%, 8.8%, and 2.7%, respectively. Around 6.2% women used tobacco during pregnancy. Teenage was the most common age of initiation of bidi smoking. Logistic regression analysis showed that the prevalence of tobacco use was high among Hindu unemployed women with no formal education belonged to scheduled caste, and those having grandchildren.

**CONCLUSIONS:** This study highlighted high rates of tobacco use and explored both individual and family factors related to tobacco use among women. Affordable, culturally acceptable, sustainable and gender-sensitive individual and community-specific interventions will reduce the prevalence and effects of tobacco use.

PMID: 25526254 [PubMed - in process]


**Abstract**

**BACKGROUND:** There is growing concern among policy makers with respect to alarming growth in smoking prevalence among women in the developing countries.


**RESULTS:** Smoking use among women has doubled from 1.4% to 2.9% (P < 0.001) during the period 2005-2010. The prevalence of smoking increased with decrease in per capita State Gross Domestic Product and literacy status for both men and women.

**CONCLUSION:** As the overall smoking prevalence grows, female smoking is growing at a faster rate than smoking among males, which is an emerging concern for tobacco control in India and requires the attention of policymakers.

PMID: 25422803 [PubMed] PMCID: PMC4236695

Abstract

BACKGROUND: Worldwide, use of tobacco is viewed as an important threat to the health of pregnant women and their children. However, the extent of tobacco use in pregnant women in low-income and middle-income countries (LMICs) remains unclear. We assessed the magnitude of tobacco use in pregnant women in LMICs (including India).

METHODS: We used data from Demographic and Health Surveys (DHS) done in 54 LMICs between Jan 1, 2001, and Dec 1, 2012, comprising 58,922 pregnant women (aged 15-49 years), which were grouped by WHO region. Prevalence of current tobacco use (smoked and smokeless) was estimated for every country. Pooled estimates by regions and overall were obtained from random-effects meta-analysis.

FINDINGS: Pooled prevalence of any tobacco use in pregnant women in LMICs was 2.6% (95% CI 1.8-3.6); the lowest prevalence was in the African region (2.0%, 1.2-2.9) and the highest was in the Southeast Asian region (5.1%, 1.3-10.9). The pooled prevalence of current tobacco smoking in pregnant women ranged from 0.6% (0.3-0.8) in the African region to 3.5% (1.5-12.1) in the Western Pacific region. The pooled prevalence of current smokeless tobacco use in pregnant women was lowest in the European region (0.1%, 0.0-0.3) and highest in the Southeast Asian region (2.6%, 0.0-7.6).

INTERPRETATION: Overall, tobacco use in pregnant women in LMICs was low; however high prevalence estimates were noted in some LMICs. Prevention and management of tobacco use and exposure to second-hand smoke in pregnancy is crucial to protect maternal and child health in LMICs.

Comment in


PMID: 25304418 [PubMed - in process]


Abstract

Assam is the highest tea producing state in India. A large number of workers are engaged in various units of tea industry. There are few reports on the health status of the tea garden workers. The present cytogenetic bio monitoring study was undertaken to investigate the genotoxic effect associated with workers in tea industries in southern Assam. Smokeless tobacco chewing along with betel nut is very common practice among the workers. Workers also get exposed periodically to mixture of pesticides. Employing buccal micronucleus cytome assay, exfoliated buccal cells were analyzed in 90 female tea garden and compared to 90 age and sex matched non-chewer control as well as 70 chewers who are not tea garden workers. Statistically significant (p<0.001) increase in genotoxic and cell death parameters was observed in tea garden workers compared to both the control groups. The frequency of cell proliferation biomarkers was highest in the chewer controls whereas genotoxic and cell death parameters were highest in tea garden workers. Linear correlation analysis revealed strong positive correlation between the duration of occupation and the frequency of micronucleus (r=0.597; p<0.001) as well as cell death parameters (r=0.588; p<0.001). Amount of chewing also had significant positive correlation with micronucleus frequency (r=0.243 or 5.9%; p<0.05) and cell death parameters (r=0.217; p<0.05). A statistically significant decrease in total RBC count, haemoglobin content as well as acetylcholine esterase in the blood of exposed individuals was observed. The average BMI among the tea garden workers was relatively lower compared to the control group. Pesticide exposure and chewing areca nut along with smokeless tobacco use may be responsible for changes in cytome parameters in exfoliated buccal cells.

PMID: 23706883 [PubMed - indexed for MEDLINE]

Abstract

OBJECTIVE: To determine whether residential environmental tobacco smoke (ETS) exposure during pregnancy is associated with low birth weight (LBW) neonates and establish a dose response relationship.

DESIGN: Case control study.

SETTING: Tertiary care hospital.

METHODOLOGY: Mothers giving birth to LBW neonate (<2.5 kg) were cases and those whose neonates weighed ≥2.5 kg at birth were controls. Excluded were women smokers and tobacco chewers, high parity (>3), multiple pregnancy and still births. Included were 100 cases and 200 controls, aged 20 to 30 years. Information was collected on ETS exposure and other risk factors of LBW within 24 hours of delivery. Clinical information like maternal haemoglobin levels, birth weight and gestational age of the neonate was extracted from hospital records.

RESULTS: On univariate analysis, preterm pregnancy, low socioeconomic status, previous LBW neonate, no utilization of antenatal care (ANC), severe anemia and ETS exposure were statistically significantly associated with LBW neonate and controlling for these in logistic regression analysis, adjusted Odds ratio for ETS exposure association with LBW neonate was 3.16 (95% CI=1.88-5.28). A dose response relationship was also found which was statistically significant (10-20 cigarettes smoked/day: OR = 4.06, 95% CI=1.78-9.26 and >20 cigarettes smoked/day, OR = 17.62, 95% CI= 3.76-82.43).

CONCLUSION: Exposure to ETS during pregnancy is associated with LBW of neonates. Hence, there is an urgent need to increase awareness about health hazards of ETS during pregnancy and bring about behavioural changes accordingly as one of the strategies to reduce LBW deliveries in India.

PMID: 22728635 [PubMed - indexed for MEDLINE]


Abstract

Tobacco use and secondhand smoke (SHS) exposure in reproductive-aged women can cause adverse reproductive health outcomes, such as pregnancy complications, fetal growth restriction, preterm delivery, stillbirths, and infant death. Data on tobacco use and SHS exposure among reproductive-aged women in low- and middle-income countries are scarce. To examine current tobacco use and SHS exposure in women aged 15-49 years, data were analyzed from the 2008-2010 Global Adult Tobacco Survey (GATS) from 14 low- and middle-income countries: Bangladesh, Brazil, China, Egypt, India, Mexico, Philippines, Poland, Russia, Thailand, Turkey, Ukraine, Uruguay, and Vietnam. The results of this analysis indicated that, among reproductive-aged women, current tobacco smoking ranged from 0.4% in Egypt to 30.8% in Russia, current smokeless tobacco use was <1% in most countries, but common in Bangladesh (20.1%) and India (14.9%), and SHS exposure at home was common in all countries, ranging from 17.8% in Mexico to 72.3% in Vietnam. High tobacco smoking prevalence in some countries suggests that strategies promoting cessation should be a priority, whereas low prevalence in other countries suggests that strategies should focus on preventing smoking initiation. Promoting cessation and preventing initiation among both men and women would help to reduce the exposure of reproductive-aged women to SHS.

PMID: 23114255[PubMed - indexed for MEDLINE]
Less demand for tobacco smokers in the marriage market.

Abstract

BACKGROUND: In order to control the tobacco scourge, an array of measures is required.

AIMS: To determine the attitude of unmarried females toward tobacco smokers and ascertain their attitude toward marrying a smoker.

SETTINGS AND DESIGN: Female students from randomly selected colleges in Kannur district, Kerala state, India, were the participants for this cross-sectional study.

MATERIALS AND METHODS: Sample consisted of 1800 unmarried female students from two colleges. A self-administered, structured, close-ended pilot-tested questionnaire was used for data collection. Data were collected after obtaining verbal consent from them.

STATISTICAL ANALYSIS: Data collected were entered into an excel spread sheet and analyzed using PASW 17 software.

RESULTS: The participants' age ranged between 17 and 25 years. About 59.6% revealed that their parents (father) used tobacco products. Of those with no family history of tobacco use, 96.5% had negative attitude toward tobacco smokers, whereas of the participants with family history of tobacco use among parents, 89% were with a negative attitude toward tobacco use or their parent's habit. This association was found to be statistically significant (P < 0.001); 79% expressed negative attitude toward their male co-students who use tobacco products. Of the total, 99.3% expressed their unwillingness to marry a person with the habit of tobacco use, whereas 0.7% were willing to marry a person with tobacco habit with the belief that they could bring about a change in their male partner's tobacco habit.

CONCLUSION: More comprehensive tobacco control activities can be undertaken in the community and colleges by incorporating female students as facilitators.

PMID: 20622421 [PubMed - indexed for MEDLINE]


Abstract

OBJECTIVES: We assessed social disparities in the prevalence of overall tobacco use, smoking, and smokeless tobacco use in Mumbai, India, by examining occupation-, education-, and gender-specific patterns.

METHODS: Data were derived from a cross-sectional survey conducted between 1992 and 1994 as the baseline for the Mumbai Cohort Study (n=81837).

RESULTS: Odds ratios (ORs) for overall tobacco use according to education level (after adjustment for age and occupation) showed a strong gradient; risks were higher among illiterate participants (male OR = 7.38, female OR = 20.95) than among college educated participants. After age and education had been controlled, odds of tobacco use were also significant according to occupation; unskilled male workers (OR = 1.66), male service workers (OR = 1.32), and unemployed individuals (male OR = 1.84, female OR = 1.95) were more at risk than
professionals. The steepest education- and occupation-specific gradients were observed among male bidi smokers and female smokeless tobacco users.

**CONCLUSIONS:** The results of this study indicate that education and occupation have important simultaneous and independent relationships with tobacco use that require attention from policymakers and researchers alike.

PMID: 15914825 [PubMed - indexed for MEDLINE] PMCID: PMC1449300


**Abstract**

**OBJECTIVE:** To study the effect of using smokeless tobacco during pregnancy on babies' birth weight and gestational age at birth.

**DESIGN:** Population based, prospective cohort study using a house to house approach.

**SETTING:** Eight primary health post areas in the city of Mumbai (Bombay), India.

**PARTICIPANTS:** 1217 women who were three to seven months pregnant and planning to deliver in the study area. 1167 women (96%) were followed up.

**MAIN OUTCOME MEASURES:** Birth weight and gestational age in singleton births.

**RESULTS:** Smokeless tobacco use was associated with an average reduction of 106 g in birth weight (95% confidence interval 30 g to 181 g) and a reduction in gestational age of 6.2 (3.0 to 9.4) days. The odds ratio for low birth weight was 1.6 (1.1 to 2.4), adjusted by logistic regression for maternal age, education, socioeconomic status, weight, anemia, antenatal care, and gestational age. The adjusted odds ratio for preterm delivery (< 37 weeks) was 1.4 (1.0 to 2.1); for delivery before 32 weeks it was 4.9 (2.1 to 11.8) and before 28 weeks it was 8.0 (2.6 to 27.2).

**CONCLUSIONS:** Consumption of smokeless tobacco during pregnancy decreases gestational age at birth and birth weight independent of gestational age. It should receive specific attention as a part of routine prenatal care.

PMID: 15198947 [PubMed - indexed for MEDLINE] PMCID: PMC437147


**Abstract**

The World Health Organization (WHO) attributes 4.9 million deaths annually to tobacco. That figure could reach 10 million by 2030. The Global Youth Tobacco Survey (GYTS), an international surveillance project developed jointly by WHO and the US Centers for Disease Control and Prevention (CDC), enables countries to monitor youth tobacco use and guide implementation and evaluation of tobacco prevention and control programs. The GYTS has been completed at 121 sites in 76 countries plus the Gaza Strip/West Bank, with national-level data generated in 52 countries, and city, state, or provincial/regional data generated in 24 countries. This paper reports on gender differences in tobacco use among young people in the six WHO Regions worldwide (including India from SEAR). Two unexpected findings emerged from the study. First, little difference existed between the genders in cigarette smoking or in use of other tobacco products. From 120 sites that collected data on cigarette smoking by boys and girls, more than one-half (n = 61) showed no difference by gender. For other tobacco products, 82 of 117 sites (70.1%) showed no difference by gender. Second, analysis revealed surprisingly high use of other tobacco products compared to cigarette smoking. Findings suggest programs should focus broadly on all tobacco products, not just cigarettes. Also, programs need gender-sensitive components that focus on
unique consequences for females, such as effects on reproduction. Lack of gender differences in the study underscores the potential growth of the tobacco epidemic, especially among women in developing countries—where most sites in this study were located.

PMID: 12899101 [PubMed - indexed for MEDLINE]

1.8. Elderly


Abstract

This study compared genetic polymorphisms (factor V Leiden [FVL] 1691G/A, factor VII [FVII] 10976G/A, FVII HVR4, platelet membrane glycoproteins GP1BA 1018C/T, GP1BA VNTR, integrin ITGB3 1565T/C, ITGA2 807C/T and methylenetetrahydrofolate reductase [MTHFR] 677C/T), biochemical (fibrinogen and homocysteine), and conventional risk factors in 184 young and 166 elderly north Indian patients with acute myocardial infarction (AMI). Univariate analysis revealed higher prevalence of hypertension and obesity in elderly patients while smoking, alcohol intake, and low socioeconomic status in young patients (P < .001). Although mean fibrinogen predominated (P = .01) in elderly patients, mean homocysteine was higher (P < .001) among young patients. Prevalence of hyperhomocysteinemia was greater in young than in elderly patients (odds ratio: 2.8, 95% confidence interval: 1.8 -4.4, P < .001); however, genetic polymorphisms were equally prevalent in young and elderly patients. Multiple logistic regression analysis showed smoking (P < .001), alcohol intake (P = .046), and hyperhomocysteinemia (P = .001) to be associated with AMI in the young patients while hypertension (P = .006) in elderly patients. To conclude, smoking, alcohol intake, and elevated homocysteine are the risk factors for AMI among young while hypertension among elderly patients.

PMID: 25155498 [PubMed - as supplied by publisher]


Abstract

Cigarette smoking is the foremost health risk issue affecting individuals of all age groups globally. It specifically influences the geriatric population as a result of chronic exposure to toxins. Its role in various systemic and oral diseases including cancer, premalignant lesions, periodontitis, tooth loss, dental caries and implant failures is well established. Smoking causes immuno-inflammatory imbalances resulting in increased oxidative stress in the body. The latter hastens the immunosenesence and inflammaging process, which increases the susceptibility to infections. Thus, implementation of smoking cessation programs among older adults is imperative to prevent the development and progression of oral and systemic diseases. The present review focuses on smoking-associated oral health problems in older adults, and the steps required for cessation of the habit.

PMID: 24697929 [PubMed - in process]


Abstract

BACKGROUND: To identify levels of physical inactivity and smoking and examine their relationships to health among older people in India.

METHODS: In 2010, Longitudinal Aging Study in India researchers interviewed 1,683 older adults in randomly sampled households with members aged ≥45 years in eight stratified districts in four states (90.9% response
rate). We first used descriptive analyses to characterize older people in poor and good health. Differences between groups were established using chi-squared and t-tests. Multivariate logistic regression analyses were then performed to determine whether physical inactivity and smoking led to poor health while controlling for district of residence, caste, age, gender, marital status, and educational level. Regression analyses were also used to identify significant relationships between socio-demographic characteristics and health behaviors.

RESULTS: Larger proportions of older people in poor health were smokers (26.1% vs. 16.9%; p≤0.001) and physically inactive (vigorous activities: 88.7% vs. 70.7%, p≤0.001; moderate activities: 67.1% vs. 57.1%, p≤0.01). Smoking (p≤0.05) and lack of vigorous physical activity (p≤0.001) increased the likelihood of poor health. Low educational level was significantly related to smoking and the lack of moderate physical activity (both p≤0.001). Female gender decreased the likelihood of smoking. Male gender increased the likelihood of vigorous physical activity but decreased the likelihood of moderate physical activity.

CONCLUSIONS: Smoking and physical inactivity have important impacts on the health of older people in India. Policy attention is needed to improve these modifiable health behaviors.

PMID: 24884852 [PubMed - in process] PMCID: PMC4047779


Abstract

PURPOSE: We examined tobacco use pattern and its correlates among older adults.

MATERIALS AND METHODS: We used data of 9,852 older adults (≥60 years) (men 47% mean age 68 years) collected by the United Nations Population Fund on Ageing from seven Indian states. Logistic regression analysis was used to assess the correlates of tobacco use.

RESULTS: Current use of any form of tobacco was reported by 27.8% (men 37.9%, women 18.8%); 9.2% reported only smoking tobacco, 16.9% smokeless tobacco only and 1.7% used both forms. Alcohol users (OR:5.20, 95% CI:4.06-6.66), men (OR:2.92, CI:2.71-3.47), those reporting lower income (OR:2.74, CI:2.16-3.46), rural residents (OR 1.34, CI 1.17-1.54) and lower castes (OR:1.29, CI:1.13-1.47) were more likely to use any form of tobacco compared to their counterparts.

CONCLUSIONS: Tobacco cessation interventions are warranted in this population focusing on alcohol users, men, those from lower income, rural residents and those belonging to a lower caste.

PMID: 2512459 [PubMed - in process]


Abstract

BACKGROUND: Estimates of health problems of the elderly in developing countries are required from time to time to predict trends in disease burden and plan health care for the elderly. Developing countries have a poor track record of equitable distribution of health care. Marginalized groups living in urban slums and rural villages have poor penetration of health services.

AIMS: To identify the geriatric health problems in samples drawn from a slum and a village, and also to explore any gender and urban-rural difference morbidity.

SUBJECT AND METHODS: A community-based cross-sectional study was carried out by house to house survey of all people aged over 60 years in an urban slum and a village in the field practice area of a teaching hospital. The total elderly population in these two areas was 407, with an almost equal representation from urban slum and rural area. Information (most of them self-reported) was collected in a pre-tested instrument, which has been used earlier in a World Health Organization multicentric study in India. Categorical variables were
summarized by percentages. Associations were explored with odds ratio (OR) and 95% confidence intervals (CIs).

RESULTS: Female elders outnumbered the male elders; widows outnumbered widowers. Tobacco use was very high at 58.97% (240/407). Visual impairment (including uncorrected presbyopia) was the most common handicap with prevalence of 83.29% (339/407), with males more affected than females (OR = 2.52, 95% CI 1.32-4.87). Uncorrected hearing impairment was also common. Urinary complaints were also more common in males (OR = 1.68, 95% CI = 0.93-3.04). More rural elders were living alone than their urban counterpart (OR = 2.87, 95% CI 1.23-6.86). History of weight loss was higher in the rural areas, while tendency to obesity was higher in the urban areas. An appreciable number 29.2% (119/407) had unoperated cataract. Prevalence of hypertension was 30.7% (125/407); 12% (49/407) had diabetes; 7.6% (31/407) gave history of ischemic heart disease, males more than females (OR = 3.75, 95% CI 1.62-8.82). A large proportion, 32.6%. (133/407) had dental problems. Almost half of the population gave history of depression.

CONCLUSION: A large number of unmet health needs, such as unoperated cataract, uncontrolled hypertension, uncorrected hearing impairment and tobacco use, exist in marginalized groups. Health interventions for these are needed in developing countries. Preventive services such as tobacco cessation campaigns among the elderly should also get priority.

PMID: 23634324 [PubMed] PMCID: PMC3634218


Abstract

BACKGROUND: Though, increased emphasis is being given on spreading dental care facilities and awareness in Indian villages, the target population is unfortunately less literate and is not financially equipped compared to their urban counterparts. The rural aged additionally may have to face problems like desertion by the educated youth to follow better opportunities in cities, disease, and lack of mobility.

AIMS: The present study strived to evaluate dental myths, oral hygiene methods, and tobacco habits awareness in a rural ageing population in the perspective of a changing India.

SETTING AND DESIGN: The study area consisted of a group of ten villages, situated in district Lucknow, Uttar Pradesh, India.

MATERIALS AND METHODS: The subjects were questioned about dental myths, tobacco habits, and oral hygiene methods and then divided into groups on the basis of age, sex, and educational status. The number of sound teeth in each subject was also counted.

STATISTICAL ANALYSIS: Mean-values, standard deviation, Chi-square test and P values were used to make inter-group comparisons.

RESULTS AND CONCLUSION: Forty percent of the subjects considered oral hygiene unnecessary, 60.8% of the population was relying on simple mouth rinsing for maintaining oral hygiene, 48% had either the habit of smoking and chewing tobacco or both and 81% of the subjects had one dental myth or the other. We concluded that the rural aged is a deprived lot and a targeted program to infuse scientific dental practices in them is necessary.

PMID: 23965455 [PubMed - in process]

Abstract

BACKGROUND: The concurrent use of alcohol and tobacco and its deleterious effects have been reported in the western literature. However, studies on the relationship between concurrent alcohol and tobacco use in India are limited. This study outlines the association between concurrent alcohol and tobacco use among a middle-aged and elderly population in a western Indian cohort after controlling for various sociodemographic factors.

METHODS: A total of 35 102 men, 45 years of age and above were interviewed for concurrent alcohol and tobacco use. The sample was part of an earlier cohort drawn from the general population. The data were analysed after controlling for age, education, religion and mother-tongue.

RESULTS: Among alcohol users, 51.1% smoked tobacco and 35.6% used smokeless tobacco. The relative risk of alcohol use was highest among those smoking cigarettes or bidis and among those using mishri with betel quid and tobacco. The risk of alcohol use increased with the frequency of tobacco use. The risk also increased with higher amounts of alcohol consumption, but peaked at around 100-150 ml of absolute alcohol use.

CONCLUSION: The study highlights the association between concurrent alcohol and tobacco use among the Indian population. This has important public health implications since concurrent use of these is synergistic for increased risk of oropharyngeal cancers.

PMID: 15981446 [PubMed - indexed for MEDLINE]

1.9. General population


Abstract

BACKGROUND: Tobacco smoking is an integral part of prison life and an established part of the culture. Little attention has been paid to prevention of smoking in prison. Approximately 70-80% of prisoners have been identified as current smokers.

AIM: To assess the effectiveness of smoking cessation intervention among male prisoners at Central Jail, Bangalore city.

AIM: To assess the effectiveness of smoking cessation intervention among male prisoners at Central Jail, Bangalore city.

MATERIALS AND METHODS: A randomized controlled trial was planned among male prisoners in Central Jail, Bangalore city. There were 1600 convicted prisoners. A self-administered questionnaire was given to the prisoners to assess their smoking behavior by which prevalence of tobacco smoking was found. Exactly 1352 tobacco users were studied. Among them, there were 1252 smokers. Based on inclusion criteria and informed consent given by the prisoners, a sample of 600 was chosen for the study by systematic random sampling. Among the 600 prisoners, 300 were randomly selected for the study group and 300 for the control group.

RESULTS: Prevalence of tobacco smoking among the prisoners was 92.60%. In the present study, after smoking cessation intervention, 17% showed no change in smoking, 21.66% reduced smoking, 16% stopped smoking, and 45.33% relapsed (P < 0.0001) at the end of 6-month follow-up in the study group.

CONCLUSION: Tobacco use was high among the prisoners. Tobacco reduction is possible in the prison even if the living conditions are not favorable. Relatively high rate of relapse in our study indicates that some policies should be adopted to improve smokers’ information on consequences of tobacco on health and motivational intervention should be added to prisoners.

PMID:25558450[PubMed]PMCID:PMC4278102

No abstract available


No abstract available
PMID: 25526257 [PubMed - in process]


Abstract

BACKGROUND: Since petrol is combustible and smoking is banned at the petrol pumps, it may be predicted that use of smokeless tobacco is more prevalent among the petrol fillers. Also, smokeless tobacco is a major risk factor for developing oral potentially malignant disorders. The present study was conducted to determine the tobacco use, body mass index (BMI), and potentially malignant disorders among a cohort of petrol fillers and also to evaluate the interaction of tobacco use and BMI with the presence of potentially malignant disorders.

SETTINGS AND DESIGN: The study was conducted at 45 petrol stations located at Pimpri-Pune, India. A descriptive study design was used.

MATERIALS AND METHOD: Four hundred and ten petrol fillers aged 17-64 years participated in the study. General information and tobacco history was obtained by interview. Height and weight were recorded to obtain BMI. Oral examination was conducted to identify the potentially malignant disorders.

STATISTICAL ANALYSIS: Chi-square test, Z test, and logistic regression were used. The level of significance was fixed at 5%.

RESULTS AND CONCLUSIONS: It was found that 242 (59.02%) used tobacco in different forms. 77.68% were tobacco chewers, and 8.26% were smokers. Leukoplakia was prevalent among 68.47%; oral submucous fibrosis among 27.45%, and 5.08% had erythroplakia. Age ($\chi^2 = 11.46, P < 0.05$), duration ($\chi^2 = 17.46, P < 0.05$), and frequency of tobacco chewing ($\chi^2 = 14.16, P < 0.05$) were significantly associated with potentially malignant disorders. Tobacco chewing was more prevalent as compared to smoking. It can be concluded that the petrol fillers are at a high risk for developing oral potentially malignant disorders.

PMID: 25422802[PubMed] PMCID: PMC4236694


PMID: 25422799 [PubMed] PMCID: PMC4236691
India


Abstract

BACKGROUND: In South and Southeast Asian countries, tobacco is consumed in diverse forms, and smoking among women is very low. We aimed to provide national estimates of prevalence and social determinants of smoking and smokeless tobacco use among men and women separately.

METHODS: Data from Demographic and Health Surveys completed in nine countries (India, Pakistan, Nepal, Bangladesh, Maldives, Philippines, Cambodia, Indonesia, and Timor Leste) were analyzed. Current smoking or smokeless tobacco use was assessed as response "yes" to one or more of three questions, such as "Do you currently smoke cigarettes?" Weighted country-level prevalence rates for socio-economic subgroups were calculated for smoking and smokeless tobacco use. Binary logistic regression analyses were done on STATA/IC (version 10) by 'svy' command.

RESULTS: Prevalence and type of tobacco use among men and women varied across the countries and among socio-economic sub groups. Smoking prevalence was much lower in women than men in all countries. Smoking among men was very high in Indonesia, Maldives, and Bangladesh. Smokeless tobacco (mainly chewable) was used in diverse forms, particularly in India, among both men and women. Chewing tobacco was common in Nepal, Bangladesh, Maldives, and Cambodia. Both smoking and smokeless tobacco use were associated with higher age, lower education, and poverty, but their association with place of residence and marital status was not uniform between men and women across the countries.

CONCLUSION: Policymakers should consider type of tobacco consumption and their differentials among various population subgroups to implement country-specific tobacco control policies and target the vulnerable groups. Smokeless tobacco use should also be prioritized in tobacco control efforts.

PMID: 25183954 [PubMed] PMCID: PMC4151025


Abstract

BACKGROUND: Tobacco is a highly addictive substance. Tobacco usage is considered one of the main causes responsible for the death of adults worldwide, with 4.9 million deaths occurring worldwide each year. And if the current tobacco usage patterns continue, it will cause some 10 million deaths every year by 2020.

MATERIALS AND METHODS: A descriptive study was carried out among 566 prisoners of central prison Bangalore, who met the inclusion criteria. Data were collected using a questionnaire and nicotine dependence was assessed using fagerstrom questionnaire.

RESULTS: The study group was categorized based on the age, gender, imprisonment status and education. In this study, 87.5% subjects were smokers, and 15.9% were smokeless tobacco users. 69.1% mentioned they use more tobacco daily during incarceration than at liberty. 87.1% agreed with the fact that "prison stress" was a factor enhancing the need for tobacco usage. 69.1% mentioned as lack of freedom, 77.4% mentioned boredom as factors enhancing need for tobacco usage while imprisoned. While 69.9% mentioned stress as a factor that trigger tobacco usage at liberty. 69.6% mentioned that they had never attempted to quit tobacco. Fagerstrom scale for level of nicotine dependence smoking showed that for smoking form 62.7% were at very high dependence and for smokeless form 64.4% were at very high dependence.

CONCLUSION: The findings of this study suggest many implications for policy relevance, since the findings indicate the sales of tobacco products in the prison canteens.

PMID: 25395788[PubMed] PMCID: PMC4229824

**Abstract**

**BACKGROUND:** The implementation of comprehensive smoke-free laws has been associated with reductions in second-hand smoke exposure at home in several high income countries. There is little information on whether these benefits extend to low income and middle income countries with a growing tobacco-related disease burden such as India.

**METHODS:** State and individual-level analysis of cross-sectional data from the Global Adult Tobacco Survey India, 2009/2010. Associations between working in a smoke-free indoor environment and living in a smoke-free home were examined using correlation at the state level, and multivariate logistic regression at the individual level.

**RESULTS:** The percentage of respondents employed indoors (outside the home) working in smoke-free environments who lived in a smoke-free home was 64.0% compared with 41.7% of those who worked where smoking occurred. Indian states with higher proportions of smoke-free workplaces had higher proportions of smoke-free homes (rs=0.54, p<0.005). In the individual-level analysis, working in a smoke-free workplace was associated with a significantly higher likelihood of living in a smoke-free home (adjusted OR=2.07; 95% CI 1.64 to 2.52) after adjustment for potential confounders.

**CONCLUSIONS:** Implementation of smoke-free legislation in India was associated with a higher proportion of adults reporting a smoke-free home. These findings further strengthen the case for accelerated implementation of Article 8 of the Framework Convention on Tobacco Control (FCTC) in low and middle income countries.


**Abstract**

**BACKGROUND:** Gutkha and pan masala contain harmful and carcinogenic chemicals. Hence, Maharashtra Government banned their manufacture, storage, distribution and sale on 19 th July 2012 for a year.

**OBJECTIVES:** The objective of this study is to determine the impact of the ban on gutkha and pan masala on its users and vendors.

**MATERIALS AND METHODS:** A cross-sectional study was conducted among gutkha and/or pan masala users and tobacco vendors in the selected area of Mumbai city, 4-6 months after the implementation of the ban. The parameters studied included knowledge regarding the ban, usage or discontinuation of use of the banned products, product availability, withdrawal symptoms among quitters, etc.,

**RESULTS:** A total of 68 users and five tobacco vendors were enrolled in this study. Although all users were aware about the ban on gutkha, very few knew about the ban on pan masala. Only 5.9% of users knew that currently the ban had been declared for only 1 year. Electronic media was the main source of information regarding the ban as reported by 45.6% users. All users and vendors were in favor of the ban. After the ban, 23.53% gutkha users quit their habit while 55.88% reduced their gutkha consumption. Non-availability of gutkha was the most important reason stated by the gutkha users for quitting or reducing the consumption. In spite of the ban, gutkha is still available in the market, but at an increased cost or in a different form.

**CONCLUSION:** Nearly 23.53% of gutkha users have quit their habit post-ban despite its availability through illegal sources.

PMID:25104193[PubMed - in process]

Abstract

BACKGROUND: Tobacco smoking is a major risk factor for many diseases. We sought to quantify the burden of tobacco-smoking-related deaths in Asia, in parts of which men's smoking prevalence is among the world's highest.

METHODS AND FINDINGS: We performed pooled analyses of data from 1,049,929 participants in 21 cohorts in Asia to quantify the risks of total and cause-specific mortality associated with tobacco smoking using adjusted hazard ratios and their 95% confidence intervals. We then estimated smoking-related deaths among adults aged ≥45 y in 2004 in Bangladesh, India, mainland China, Japan, Republic of Korea, Singapore, and Taiwan-accounting for ~71% of Asia's total population. An approximately 1.44-fold (95% CI=1.37-1.51) and 1.48-fold (1.38-1.58) elevated risk of death from any cause was found in male and female ever-smokers, respectively. In 2004, active tobacco smoking accounted for approximately 15.8% (95% CI=14.3%-17.2%) and 3.3% (2.6%-4.0%) of deaths, respectively, in men and women aged ≥45 y in the seven countries/regions combined, with a total number of estimated deaths of ~1,575,500 (95% CI=1,398,000-1,744,700). Among men, approximately 11.4%, 30.5%, and 19.8% of deaths due to cardiovascular diseases, cancer, and respiratory diseases, respectively, were attributable to tobacco smoking. Corresponding proportions for East Asian women were 3.7%, 4.6%, and 1.7%, respectively. The strongest association with tobacco smoking was found for lung cancer: a 3- to 4-fold elevated risk, accounting for 60.5% and 16.7% of lung cancer deaths, respectively, in Asian men and East Asian women aged ≥45 y.

CONCLUSIONS: Tobacco smoking is associated with a substantially elevated risk of mortality, accounting for approximately 2 million deaths in adults aged ≥45 y throughout Asia in 2004. It is likely that smoking-related deaths in Asia will continue to rise over the next few decades if no effective smoking control programs are implemented. Please see later in the article for the Editors' Summary.

PMID: 24756146 [PubMed - indexed for MEDLINE] PMCID: PMC3995657


Abstract

BACKGROUND: Prisoners represent a population group that is disadvantaged, socially deprived and underprivileged, needing particular attention with regard to provision of necessary oral health care, health promotion and motivation and tobacco cessation. Considering the situation in prisons, smoking and tobacco chewing are burning issues related to health deterioration and economic loss that seem to be overlooked by the public health sectors.

AIM: To assess prisoners’ perception of tobacco use and cessation in Chhattisgarh, India.

MATERIALS AND METHODS: A pre-tested, close ended questionnaire was administered in the form of extensive face to face interviews, to assess perceptions regarding tobacco use and cessation in the central jail of Durg District of Chhattisgarh state, India.

RESULTS: Prevalence of tobacco usage amongst the prisoners was found to be 61%. Some 27% reported smoking, 44% used tobacco in the chewable form and 29% indulged in consuming tobacco in both forms i.e. smoked as well as chewed. Results suggest several recommendations for policy relevance such as provision of a prison dentist, a tobacco cessation counseling program and targeted eradication of oral cancer by educating the prisoners.
CONCLUSIONS: Health is a fundamental human "right of everyone to the enjoyment of the highest attainable standard of physical and mental well-being". This applies to prisoners just as it does to every other human being. The alarming findings in the study suggest the need for dental treatment facilities and tobacco cessation counseling in prisons.

PMID: 24528066 [PubMed - indexed for MEDLINE]


Abstract

BACKGROUND: This study was conducted to gauge how the demographic profile of smokeless tobacco (SLT) users from Gujarat and Andhra Pradesh, India, differs from that of smokers. It also addresses how factors associated with the initiation and continuation of smokeless tobacco vary by age, gender, and education.

MATERIALS AND METHODS: We analyzed 2011 cross-sectional survey data collected from 4,759 respondents (smokers/SLT users/ non-users) in both states. Chi-square analysis was used to make comparisons between the demographic profiles of smokers and SLT users. Multivariable logistic regression analysis was used to obtain the odds ratios (ORs) for initiation and continuation factors regressed on socio-demographic variables (age, gender, education).

RESULTS: Initiation-women were less likely than men to report "peer pressure", "fashion statement", and "stress/coping" as relevant factors for SLT use (OR: 0.45 CI: 0.30-0.70; OR: 0.42 CI: 0.24-0.74; OR: 2.47, CI: 1.47-4.15). Older age groups had lower odds of choosing "peer pressure" than the 15-24 year olds. Respondents with 11 or more years of education were more likely to report "stress/coping" than those with no education (OR: 2.82, CI: 1.06-7.48). Continuation-women were less likely than men to choose "relaxation", and "distance from family" as important continuation factors (OR: 0.50, CI: 0.32-0.80; OR: 0.20, CI: 0.06-0.65). All age groups were less likely to choose "stimulation" as a factor than the youngest group.

CONCLUSIONS: Along with confirming and expanding upon previous literature, the findings of this study should encourage further SLT research in women and younger age groups (15-24 and 24-44). They also confirm the need for SLT prevention and cessation interventions in India in other community-based settings, besides schools.

PMID: 25169486 [PubMed - in process]


Abstract

INTRODUCTION: Tobacco addiction is the most widespread addiction in the world. There are nearly 1.3 billion smokers in the world, 80% of them are in the developing countries. According to American Cancer Society, India has 2nd largest population of tobacco users (about 24 crores), next only to China. The aim of this study was to determine the prevalence and trend towards tobacco use among auto drivers of Gwalior city.

MATERIAL & METHODS: It was a cross-sectional study conducted within 3 months duration by a one-on-one interview among 400 auto-rickshaw drivers of Gwalior city. The study tool was a pre-designed, pre-tested, semi-structured questionnaire.

RESULTS: The overall prevalence of tobacco use among auto drivers was 84.25%, while the prevalence of smoking and tobacco chewing were 58.25% and 70.25% respectively. Night shifts and longer waiting hours were associated with increased trend towards tobacco consumption. 38.27% drivers required one dose of tobacco immediately after waking up in the morning while 45.10% required one dose before going to toilet. 69.43% said that their friends had first introduced them to tobacco use. 88.50% knew about various health hazards associated with tobacco consumption. 68.00% drivers had knowledge about law for smoking in public places.

CONCLUSION: Recently certain new replacement products have been introduced in the market which are harmless and can also curb the craving for tobacco. Along with mass advertisements against tobacco products,
authorities should focus on strict enforcement of law and promoting research for creating new and harmless replacement products.


Abstract

In an effort to evaluate India’s progress in implementing the FCTC and to understand the impact of policies on tobacco use, quitting, and knowledge and perceptions among tobacco users and non-users, researchers from the Healis-Sekhsaria Institute for Public Health in India partnered with the International Tobacco Control Policy Evaluation Project (the ITC Project) at the University of Waterloo to create the TCP (Tobacco Control Policy) India Project – a cohort study of adult (aged 15 years and older) tobacco users and non-users. India is one of more than 20 countries that are undertaking cohort surveys as part of the ITC Project. The TCP India Wave 1 Survey was conducted between August 2010 and December 2011 in four large cities and surrounding rural districts in the states of Maharashtra (Mumbai), Madhya Pradesh (Indore), Bihar (Patna), and West Bengal (Kolkata). Face-to-face interviews were conducted with a total sample of approximately 8000 tobacco users and 2400 non-users based on a stratified multistage cluster sampling design. The sampling design was selected to provide a random, unbiased sample of adult tobacco users and nonusers within each of the four cities and their surrounding rural districts. The interviews were conducted in Hindi, Marathi, Bengali or English by trained interviewers from the Healis-Sekhsaria Institute for Public Health in Maharashtra; the School of Preventative Oncology in Bihar; the Madhya Pradesh Voluntary Health Association (MPVHA) in Madhya Pradesh; and the Cancer Foundation of India in West Bengal.


(PMID: 25104156 [PubMed - in process] (India mentioned))


Abstract

Use of tobacco is singularly responsible for most cases of cancer and coronary artery disease (CAD). Efforts to stop tobacco-use need to be guided by social circumstances. It is believed that family milieu may play a role in tobacco addiction. We studied the prevalence and pattern of tobacco-use in families of 50 consecutive tobacco-user patients who presented to a tobacco-cessation clinic and compared with age- and gender-matched controls (non-users of tobacco). The tobacco-use rates were significantly higher in the family of patients with tobacco-use compared to the control group. We conclude that problems of tobacco-use are not related to individual phenomenon, and efforts for control of tobacco addiction must be focused on entire family.

PMID: 23617213 [PubMed - indexed for MEDLINE] PMCID: PMC3702367


Abstract

Smokeless tobacco use is a major health issue but has received less attention in craving research. The present non-funded study aimed to assess craving associated with smokeless tobacco compared to smoked forms. Forty-eight nicotine dependent male subjects attending a deaddiction center in India were recruited. The subjects were exposed to six nicotine related and two control cues in random order for variable time durations. The urge to
consume the tobacco product was rated. Tobacco-related cues produced different patterns and degrees of craving among users of smoked and smokeless tobacco. This has implications for management and drug development.


Abstract

BACKGROUND: This study was undertaken to identify the socio-demographic determinants of quit attempts among smokers and smokeless tobacco users to identify correlates of tobacco cessation behaviour in India.

MATERIALS AND METHODS: This was a cross-sectional study for the outcome of quit attempts made by current tobacco users in last 12 months in twelve districts in two states. Simple and multivariable logistic regression analysis was used to obtain the odds ratios (ORs) of socio-demographic variables (age, gender, education, occupation, socio-economic status, community, area, type of family) and tobacco user status (smoker/smokeless).

RESULTS: In the combined analysis, a smoker had higher predicted probability of attempting quitting (OR - 1.41, CI 1.14 -1.90), in comparison to a smokeless tobacco user and a tobacco user in the state of Gujarat was less likely to attempt quitting than a user in Andhra Pradesh (OR-0.60, CI 0.47-0.78). The probability of making a quit attempt was higher among tobacco users who were more educated (OR-1.40, CI 1.04-1.94), having a higher socio-economic status (SES) (OR-2.39, CI 1.54-3.69), and belonging to non-agricultural labourer occupational group (OR-1.90, CI 1.29-2.78). The effects were maintained even after adjusting for all other variables. In disaggregated analysis, findings were similar except in smokeless as a separate group, education level was not significantly associated with quit attempts and with lower odds (OR-0.91, CI 0.58-1.42).

CONCLUSIONS: This is one of the first studies to provide useful insight into potential determinants for quit attempts of tobacco users in India including smokeless tobacco users, exploring the socio-demographic patterning of correlates of quit attempts.

PMID: 23679295 [PubMed - indexed for MEDLINE]


Abstract

BACKGROUND: Tobacco consumption has been identified as the single biggest cause of inequality in morbidity and mortality. Understanding pattern of socioeconomic inequalities in tobacco consumption in India will help in designing targeted public health control measures.

MATERIALS AND METHODS: Nationally representative data from the India Global Adult Tobacco Survey (GATS) conducted in 2009-2010 was analyzed. The survey provided information on 69,030 respondents aged 15 years and above. Data were analyzed according to regions for estimating prevalence of current tobacco consumption (both smoking and smokeless) across wealth quintiles. Multiple logistic regression analysis predicted the impact of socioeconomic determinants on both forms of current tobacco consumption adjusting for other socio-demographic variables.

RESULTS: Trends of smoking and smokeless tobacco consumption across wealth quintiles were significant in different regions of India. Higher prevalence of smoking and smokeless tobacco consumption was observed in the medium wealth quintiles. Risk of tobacco consumption among the poorest compared to the richest quintile was 1.6 times higher for smoking and 3.1 times higher for smokeless forms. Declining odds ratios of both forms of tobacco consumption with rising education were visible across regions. Poverty was a strong predictor in north and south Indian region for smoking and in all regions for smokeless tobacco use.

CONCLUSIONS: Poverty and poor education are strong risk factors for both forms of tobacco consumption in India. Public health policies, therefore, need to be targeted towards the poor and uneducated.

PMID: 24377634 [PubMed - indexed for MEDLINE]

Abstract

Smokeless tobacco (SLT) use is an understudied problem in South-East Asia. Information on SLT use among the adult population was collected from various available sources. SLT use prevalence varies among countries in the region. The prevalence of SLT use is known for all countries at national level in the region with the exception of Bhutan and DPR Korea. For Bhutan, data pertains to Thimpu only. There is no available data on SLT use for DPR Korea. Using all available data from Bhutan, India, Myanmar, Nepal, and Sri Lanka, SLT use was found to be higher among males as compared to females; however, in Bangladesh, Indonesia, and Thailand, SLT use was higher among females as compared to males. Among males, prevalence of SLT use varied from 51.4% in Myanmar to 1.1% in Thailand. Among females, the prevalence of SLT use varied from 27.9% in Bangladesh to 1.9% in Timor-Leste. The prevalence also varies in different parts of countries. For instance, the prevalence of current use of SLT in India ranges from 48.7% in Bihar to 4.5% in Himachal Pradesh. In Thailand, prevalence of current use of tobacco use varies from 0.8% in Bangkok to over 4% in the northern (4.1%) and northeastern (4.7%) region. Among all SLT products, betel quid was the most commonly used product in most countries including Bangladesh (24.3%) and Thailand (1.8%). However, Khaini (11.6%) chewing was practiced most commonly in India. Nearly 5% of the adult population used tobacco as dentifrice in Bangladesh and India. SLT is more commonly used in rural areas and among disadvantaged groups. Questions from standard “Tobacco Questions for Surveys (TQS)” need to be integrated in routine health system surveys in respective countries to obtain standardized tobacco use data at regular intervals that will help in providing trends of SLT use in countries.

PMID: 23442396 [PubMed - indexed for MEDLINE]


PMID:23442412[PubMed - indexed for MEDLINE]


Abstract

AIMS: This study evaluated the effectiveness of a brief intervention (BI) for illicit drugs (cannabis, cocaine, amphetamine-type stimulants and opioids) linked to the World Health Organization (WHO) Alcohol, Smoking and Substance Involvement Screening Test (ASSIST). The ASSIST screens for problem or risky use of 10 psychoactive substances, producing a score for each substance that falls into either a low-, moderate- or high-risk category.

DESIGN: Prospective, randomized controlled trial in which participants were either assigned to a 3-month waiting-list control condition or received brief motivational counselling lasting an average of 13.8 minutes for the drug receiving the highest ASSIST score.

SETTING: Primary health-care settings in four countries: Australia, Brazil, India and the United States.

PARTICIPANTS: A total of 731 males and females scoring within the moderate-risk range of the ASSIST for cannabis, cocaine, amphetamine-type stimulants or opioids.

MEASUREMENTS: ASSIST-specific substance involvement scores for cannabis, stimulants or opioids and ASSIST total illicit substance involvement score at baseline and 3 months post-randomization.

FINDINGS: Omnibus analyses indicated that those receiving the BI had significantly reduced scores for all measures, compared with control participants. Country-specific analyses showed that, with the exception of the site in the United States, BI participants had significantly lower ASSIST total illicit substance involvement scores at follow-up compared with the control participants. The sites in India and Brazil demonstrated a very strong brief
intervention effect for cannabis scores (P < 0.005 for both sites), as did the sites in Australia (P < 0.005) and Brazil (P < 0.01) for stimulant scores and the Indian site for opioid scores (P < 0.01).

CONCLUSIONS: The Alcohol, Smoking and Substance Involvement Screening Test-linked brief intervention aimed at reducing illicit substance use and related risks is effective, at least in the short term, and the effect generalizes across countries.

PMID:22126102[PubMed - indexed for MEDLINE]


Abstract

INTRODUCTION AND BACKGROUND: The prevalence of smokeless tobacco use in India is the highest in the world, with 26% of adults reporting being users of smokeless tobacco only. But to date, there are few studies of beliefs, knowledge, and other psychosocial measures relating to smokeless tobacco use in India. The aim of the present study was to use data from the ITC India Pilot Study conducted in 2006 to examine beliefs about the harms of smokeless tobacco use, knowledge of health effects, and intentions to quit among current smokeless tobacco users in two states, Maharashtra and Bihar.

METHODS: Data from the ITC India Pilot Study, a face-to-face crosssectional survey of 248 adults reporting exclusive current use of smokeless tobacco in Maharashtra and Bihar, were analyzed with respect to the knowledge of health effects, beliefs about harmfulness, and intentions to quit smokeless tobacco use.

RESULTS: Around three quarters (36%) of smokeless tobacco users from Maharashtra and two thirds (62%) from Bihar had a ‘bad’ opinion about smokeless tobacco use. About 77% believed that smokeless tobacco use causes mouth cancer, followed by gum disease (66%) and difficulty in opening the mouth (56%). Significant differences were found in health knowledge between urban and rural smokeless tobacco users in both states. Only 38% of smokeless tobacco users reported having intentions to quit, and only 11% had intentions to quit within the next 6 months. Smokeless tobacco users who reported higher knowledge of the specific health effects from smokeless tobacco use were more likely to have intentions to quit.

CONCLUSION: Despite the fairly high levels of awareness of health effects from smokeless tobacco use in Maharashtra and Bihar, the majority of smokeless users had no intentions to quit. Increased educational efforts about the detrimental health effects from smokeless tobacco use may result in higher levels of knowledge about the harms of smokeless tobacco and this in turn could increase quit intentions and subsequent quitting among users.

PMID:21875273[PubMed - indexed for MEDLINE]


Abstract

Smokeless tobacco use is on the upswing in some parts of the world, including parts of SEAR. It is therefore important to monitor this problem and understand the possible consequences on public health. Material for this review was obtained from documents and data of the World Health Organization, co-authors, colleagues, and searches on key words in PubMed and on Google. Smokeless tobacco use in SEAR, as betel quid with tobacco, declined with increased marketing of cigarettes from the early twentieth century. Smokeless tobacco use began to increase in the 1970s in South Asia, with the marketing of new products made from areca nut and tobacco and convenient packaging. As a consequence, oral precancerous conditions and cancer incidence in young adults have increased significantly. Thailand’s successful policies in reducing betel quid use through school health education from the 1920s and in preventing imports of smokeless tobacco products from 1992 are worth emulating by many SEAR countries. India, the largest manufacturing country of smokeless tobacco in the Region, is considering ways to regulate its production. Best practices require the simultaneous control of smokeless and smoking forms of tobacco. Governments in SEAR would do well to adopt strong measures now to control this problem.

PMID: 22089688 [PubMed - indexed for MEDLINE]

Comment on

- Worldwide burden of disease from exposure to second-hand smoke: a retrospective analysis of data from 192 countries. [Lancet. 2011]

PMID: 21786848 [PubMed]

Gupta PC. Tobacco control research in India. (Editorial) Indian J Cancer. 2010; 47:2


Abstract

Tobacco is a well-acknowledged social and health evil. The history of tobacco use traces back to the dawn of human civilization and has been deeply entrenched into the human society since time immemorial. The social, economic, and health impact of tobacco has been a subject of intense debate over the recent decades. For India, this problem has been a unique one, with the consumption patterns either largely influenced by the socioeconomic backgrounds or dictated by the cultural diversity. With more than 200 million tobacco consumers in the country at present, it becomes imperative to address this health hazard and stir up strong measures toward damage control. This article addresses the tobacco problem, its evolution, and the factors that have affected the growth of Indian tobacco industry. It also highlights the current legislative measures against tobacco, fiscal gains to the government, and the serious health and economic impact to the consumer, compounded by the increasing cost of private health care in the present era of consumerism.

PMID: 20622406 [PubMed - indexed for MEDLINE]


Abstract

BACKGROUND: Tobacco use is a major public health problem globally. According to the World Health Organization (WHO), tobacco is the second most important cause of death in the world. It is currently estimated to be responsible for about 5 million deaths each year worldwide. In India, it is responsible for over 8 lakh deaths every year.

OBJECTIVE: To estimate the prevalence of tobacco use among power loom workers in Mau Aima Town, District Allahabad, UP.

MATERIALS AND METHODS: Five hundred power loom workers were randomly chosen. Out of them 448 workers were interviewed through a questionnaire survey during May-June 2007. Data on demographics, education, and type of work were collected along with details regarding tobacco use and smoking status, duration of the habit, and daily consumption. Prevalence of tobacco chewing and/or bidi and cigarette smoking, and their sociodemographic correlates, were examined.

RESULTS: The overall prevalence of tobacco use was 85.9%; the prevalence of smoking and tobacco chewing were 62.28% and 66.07%, respectively. Statistical analysis showed that smoking is more common in the elderly, while chewing gutka (a type of chewing tobacco) is popular among the younger age-groups.

CONCLUSION: The prevalence of tobacco use among power loom workers is very high compared to that in general population. Immediate intervention programs are warranted to reduce the future burden of tobacco-related morbidity among these workers who are already exposed to the highly polluted environment in power loom factories.

PMID: 20606917 [PubMed] PMCID: PMC2888365
India


Abstract

Lifestyle diseases characterize those diseases whose occurrence is primarily based on the daily habits of people and are a result of an inappropriate relationship of people with their environment. The main factors contributing to lifestyle diseases include bad food habits, physical inactivity, wrong body posture, and disturbed biological clock. A report, jointly prepared by the World Health Organization (WHO) and the World Economic Forum, says India will incur an accumulated loss of $236.6 billion by 2015 on account of unhealthy lifestyles and faulty diet. According to the report, 60% of all deaths worldwide in 2005 (35 million) resulted from non communicable diseases and accounted for 44% of premature deaths. What's worse, around 80% of these deaths will occur in low and middle-income countries like India which are also crippled by an ever increasing burden of infectious diseases, poor maternal and perinatal conditions and nutritional deficiencies. According to a survey conducted by the Associated Chamber of Commerce and Industry (ASSOC-HAM), 68% of working women in the age bracket of 21-52 years were found to be afflicted with lifestyle ailments such as obesity, depression, chronic backache, diabetes and hypertension. The study 'Preventive Healthcare and Corporate Female Workforce' also said that long hours and working under strict deadlines cause up to 75% of working women to suffer from depression or general anxiety disorder, compared to women with lesser levels of psychological demand at work. The study cited scientific evidence that healthy diet and adequate physical activity - at least 30 minutes of moderate activity at least five a week - helped prevent NCDs. In India, 10% of adults suffer from hypertension while the country is home to 25-30 million diabetics. Three out of every 1,000 people suffer a stroke. The number of deaths due to heart attack is projected to increase from 1.2 million to 2 million in 2010. The diet [or lifestyle] of different populations might partly determine their rates of cancer, and the basis for this hypothesis was strengthened by results of studies showing that people who migrate from one country to another generally acquire the cancer rates of the new host country, suggesting that environmental [or lifestyle factors] rather than genetic factors are the key determinants of the international variation in cancer rates. Some of the common diseases encountered because of occupational lifestyle are Alzheimer's disease, arteriosclerosis, cancer, chronic liver disease/cirrhosis, chronic obstructive pulmonary disease (COPD), diabetes, hypertension, heart disease, nephritis/CRF, and stroke. Occupational lifestyle diseases include those caused by the factors present in the vicinity like heat, sound, dust, fumes, smoke, cold, and other pollutants. These factors are responsible for allergy, respiratory and hearing problems, and heat or cold shock. So, a healthy lifestyle must be adopted to combat these diseases with a proper balanced diet, physical activity and by giving due respect to biological clock. Kids spending too much time slouched in front of the TV or PCs, should be encourage to find a physical sport or activity they enjoy. Fun exercises should be encouraged into family outings. A pizza-and-video evening should be replaced for a hike and picnic. Kids who do participate in sport, especially at a high competitive level, can find the pressure to succeed very stressful. To decrease the ailments caused by occupational postures, one should avoid long sitting hours and should take frequent breaks for stretching or for other works involving physical movements.

PMID: 20442827 [PubMed] PMCID: PMC2862441


Abstract

CONTEXT: This paper describes the follow-up interventions and results of the workplace tobacco cessation study.

AIMS: To assess the tobacco quit rates among employees, through self report history, and validate it with rapid urine cotinine test; compare post-intervention KAP regarding tobacco consumption with the pre-intervention responses and assess the tobacco consumption pattern among contract employees and provide assistance to encourage quitting.

SETTINGS AND DESIGN: This is a cohort study implemented in a chemical industry in rural Maharashtra, India.
This is a cohort study implemented in a chemical industry in rural Maharashtra, India.

**MATERIALS AND METHODS:** All employees (104) were interviewed and screened for oral neoplasia. Active intervention in the form of awareness lectures, focus group discussions and if needed, pharmacotherapy was offered. Medical staff from the industrial medical unit and from a local referral hospital was trained. Awareness programs were arranged for the family members and contract employees.

**STATISTICAL ANALYSIS USED:** Non-parametric statistical techniques and kappa.

**RESULTS:** Forty eight per cent employees consumed tobacco. The tobacco quit rates increased with each follow-up intervention session and reached 40% at the end of one year. There was 96% agreement between self report tobacco history and results of rapid urine cotinine test. The post-intervention KAP showed considerable improvement over the pre-intervention KAP. 56% of contract employees used tobacco and 55% among them had oral pre-cancerous lesions.

**CONCLUSIONS:** A positive atmosphere towards tobacco quitting and positive peer pressure assisting each other in tobacco cessation was remarkably noted on the entire industrial campus. A comprehensive model workplace tobacco cessation program has been established, which can be replicated elsewhere.

PMID: 20442834 [PubMed] PMCID: PMC2862448


**Abstract**

**INTRODUCTION:** Although tobacco is the leading preventable cause of the death among adults in India, the general public including tobacco users has little awareness about possible consequences of tobacco use. One way of bringing more awareness is to place more information on tobacco products in the form of pictorial warnings. Strong pictorial warnings were mandated by the Indian government but were diluted later on. The question that needs to be investigated whether general public in India needs pictorial warnings on tobacco products and how the warnings would look like?

**MATERIAL AND METHOD:** A survey of 712 individuals was conducted in Mumbai and Thane. A structured questionnaire was designed and data were collected by trained field investigators. The questionnaire contains several questions on awareness of health warnings on tobacco products, opinion on strength of the warnings and on delays in implementing warnings.

**RESULTS:** Among 712 respondents, 89.9% were aware about health warning messages on cigarettes pack. 88.5% of people were strongly agreed for strengthening the pictorial health warnings. Strong pictorial health warnings would make 23.2% male tobacco users thinking to quit smoking and 33.1% never tobacco users will think twice before starting smoking.

**CONCLUSION:** Positive response was shown by general population for implementation of pictorial warnings on tobacco products. Majority of the people were strongly agreed for strong pictorial warnings which were diluted by government notifications in year 2008.


**Abstract**

**BACKGROUND:** A review of the available scientific literature concerning forms of tobacco use other than regular cigarettes, cigars and pipes, the nature of such products, prevalence data and trends, health effects, regulatory issues and preventive measures.

**RESULTS:** Narghile (water pipe), bidis, kreteks and other forms of oral tobacco are traditionally used in many low-income countries, and some of these are currently spreading to the Western countries. They are all linked to negative effects similar to, and often greater than, those associated with common cigarette smoking. Various
potentially reduced exposure products (PREPs), including snus, targeted at smokers aware of the health risks of regular cigarettes, have recently been developed by the tobacco industry. Their pathogenic potential varies widely and is not fully known; it is in any case greater than that of pure nicotine forms (such as medicinal nicotine). Their use as cigarette substitutes should not be considered even by inveterate smokers who are unable or unwilling to quit nicotine before further independent evaluation and control.

CONCLUSIONS: There is no such thing as a safe tobacco product. Like cigarettes, alternative forms of tobacco use need regulatory measures that are adapted to local situations and supplemented by preventive measures within the World Health Organization's Framework Convention for Tobacco Control.

PMID: 18544194 [PubMed - indexed for MEDLINE]


Abstract

The incontrovertible scientific evidence about tobacco use causing serious health consequences is now accepted even by the tobacco industry. Research continues to enlarge the spectrum of diseases caused by tobacco use among users as well as among nonusers exposed to secondhand tobacco smoke. This review attempts to illustrate the greater risk to adverse health outcomes among the less educated due to a greater prevalence of tobacco use among them. Numerous surveys worldwide and in India show a greater prevalence of tobacco use among the less educated and illiterate. In a large population based study in Mumbai, the odds ratios for any kind of tobacco use among the illiterate as compared to the college educated were 7.4 for males and 20.3 for females after adjusting for age and occupation. School-dropouts are more likely to take up tobacco use in childhood and adolescence. Student youth taught about the dangers of tobacco use in school are less likely to initiate tobacco use. High tobacco use among the less educated and under privileged affects them in multiple ways: (i) Tobacco users in such households, because of their nicotine addiction, prefer spending a disproportionate amount of their meager income on tobacco products, often curtailing essential expenditures for food, healthcare and education for the family. (ii) Because of high tobacco use and other factors of disadvantage connected with low educational status, they suffer more from the diseases and other health impacts caused by tobacco. This higher morbidity results in high health care expenditures, which impoverish the family further. (iii) Premature death caused by tobacco use in this underprivileged section often takes away the major wage earner in the family, plunging it into even more hardship. Tobacco use is a terrible scourge particularly of the less educated, globally and in India. Tobacco use, education and health in a human population are inter-related in ways that make sufferings and deaths caused by tobacco use even more tragic than normally realized. Tobacco use works against social and economic development and should be appropriately addressed through health education and tobacco cessation services particularly in the underprivileged, illiterate population.

PMID: 18032804 [PubMed - indexed for MEDLINE]


Abstract

Health indicators of Kerala State such as infant mortality rate (14/ 1000 live births) and life expectancy at birth (71 years for men and 76 years for women) are far ahead of the Indian averages (IMR 58, life expectancy men 62 and women 63) and closer to the developed countries. However, tobacco use prevalence is similar to the national average. Smoking is the commonest form of tobacco usage among men in the State whereas chewing tobacco is more common among women and children. Tobacco chewing among men is increasing in Kerala probably due to the smoking ban and industry strategy to focus on smokeless tobacco. Tobacco use is significantly more among the low socio-economic (SE) groups compared to the high SE group. Mortality and morbidity attributed to tobacco is higher among the poorest people in the State. Age adjusted cancer rate of oral cavity and lung cancer has been increasing in the State in recent years. Heart diseases among the young people are increasing in the State. Cancer and heart diseases are chronic illnesses which may pull the individual and the entire family below the poverty line. Tobacco control therefore should be a top priority not only as a health issue but as a poverty reduction issue. Poverty alleviation is one of the major goals of developing economies. No poverty alleviation programme can ignore the potential impoverishment associated with tobacco use. Kerala with a very strong decentralized government has a very good opportunity to address tobacco control as a priority at the grass root level and reduce the impoverishment due to tobacco use.
CONCLUSIONS:

The use of smokeless tobacco as cigarette substitutes should not be considered even by inveterate smokers who are unable to quit regular cigarettes, have recently been developed by the tobacco industry. Their pathogenic potential varies from country to country.

India and Public Health


Abstract

Worldwide, tobacco use is estimated to kill about 5 million people annually, accounting for 1 in every 5 male deaths and 1 in 20 female deaths of those over age 30. On current smoking patterns, annual tobacco deaths will rise to 10 million by 2030. The 21st century is likely to see 1 billion tobacco deaths, most of them in low-income countries. In contrast, the 20th century saw 100 million tobacco deaths, most of them in Western countries and the former socialist economies. Hundreds of millions of premature tobacco deaths could be avoided if effective interventions were widely applied in low- and middle-income countries. Numerous studies from high-income countries and a growing number from low- and middle-income countries provide robust evidence that tobacco tax increases, timely dissemination of information about the health risks of smoking, restrictions on smoking in public workplaces, comprehensive bans on advertising and promotion, and increased access to cessation therapies are effective in reducing tobacco use and its consequences. Cessation by the 1.1 billion current smokers is central to meaningful reductions in tobacco deaths over the next five decades. New analyses presented here find that higher tobacco taxes could prevent 3 million tobacco deaths by 2030 among smokers alive today. Reduced uptake of smoking by children would yield benefits chiefly after 2050. Price and non-price interventions are, for the most part, highly cost-effective. This chapter begins with an overview of smoking trends and tobacco's health consequences, followed by a discussion of the economic rationale for government intervention, with a focus on the uniquely addictive properties of nicotine. A review of the effectiveness of tobacco-control policies in reducing tobacco initiation and in increasing cessation follows. A cost-effectiveness analysis of these interventions is provided. Finally, the constraints to implementing tobacco-control policies are discussed.


Abstract

Tobacco use among psychiatric patients in developing countries has not been well-investigated. To address this issue, we screened consecutive admissions to a major psychiatric hospital in southern India, and assessed the prevalence and correlates of tobacco use and nicotine dependence. Patients (n=988) provided information about their use of tobacco products, and participated in an interview that included the Fagerström Test for Nicotine Dependence as well as measures of other substance use. Three hundred and fifty-one patients (36%) reported current tobacco use, with 227 (65% of all users) reporting moderate to severe nicotine dependence. Current tobacco use as well as nicotine dependence were associated with male gender, a diagnosis of bipolar disorder, and risk of other substance use problems. The cultural context of these findings, and the implications for tobacco control among psychiatric patients, are discussed.

Abstract

BACKGROUND: We reviewed the literature on tobacco use in Kerala and present data from three recently conducted unpublished studies.

METHODS: Three cross-sectional studies were conducted; a community-based study of 1,298 individuals aged 15 years and above (mean age 37.4 years, men 630), a school-based study of 1,323 boys (mean age 14.7 years), and a college-based study of 1,254 male students (mean age 18.2 years). Information on tobacco use and sociodemographic variables was collected using pre-tested, structured interview schedules and questionnaires.

RESULTS: In the community study, 72% of men and 6% of women had ever used tobacco. Compared to men with > 12 years of schooling, those with < 5 years of schooling were 7 times more likely to smoke (OR 7, CI 3.2-15.6). The age at initiation of smoking was 19 years among those < 25 years of age compared to 25.5 years among ever smokers > 44 years. In the school study, the age at initiation among boys aged < or = 13 years was 10.7 years compared with 13.2 years among > or = 16-year-old boys. Boys whose fathers and friends used tobacco were 2 times and 2.9 times more likely to use tobacco (OR 2.0, CI 1.3-3.1 and OR 2.9, CI 1.6-5.1), respectively, compared with their counterparts. In the college study, 29% of the commerce students used tobacco compared with 5.3% of polytechnic students (p < 0.001).

CONCLUSION: Survey data suggest that the age at initiation of tobacco use appears to be falling. A series of cross-sectional studies with larger sample sizes of the youth is required to confirm this impression. Tobacco use habits of fathers and peers are significant influences on youth smoking. There is a need to focus on particular types of colleges as these appear to have high-risk tobacco use environments.

PMID:16130619[PubMed - indexed for MEDLINE]


(No abstract available)

PMID: 15709594 [PubMed - indexed for MEDLINE]


PMID: 15709595 [PubMed - indexed for MEDLINE]


Arora, M. The tobacco journey: seeds of a menace. Health for the millions.2003; June–September, 4-6

Gupta PC. A data-base on tobacco in South-East Asia region. New Delhi: World Health Organization, SEARO; 2003

2. Tobacco related Morbidity and Mortality


Abstract

BACKGROUND: Use of smokeless tobacco (SLT) is widely prevalent in India and Indian subcontinent. Cohort and case-control studies in India and elsewhere report excess mortality due to its use.

OBJECTIVE: The aim was to estimate the SLT use-attributable deaths in males and females, aged 35 years and older, in India.
**MATERIALS AND METHODS:** Prevalence of SLT use in persons aged 35 years and older was obtained from the Global Adult Tobacco Survey in India and population size and deaths in the relevant age-sex groups were obtained from UN estimates (2010 revision) for 2008. A meta-relative risk (RR) based population attributable fraction was used to estimate attributable deaths in persons aged 35 years and older. A random effects model was used in the meta-analysis on all-cause mortality from SLT use in India including four cohort and one case-control study. The studies included in the meta-analysis were adjusted for smoking, age and education.

**RESULTS:** The prevalence of SLT use in India was 25.2% for men and 24.5% for women aged 35 years and older. RRs for females and males were 1.34 (1.27-1.42) and 1.17 (1.05-1.42), respectively. The number of deaths attributable to SLT use in India is estimated to be 368127 (217,076 women and 151,051 men), with nearly three-fifth (60%) of these deaths occurring among women.

**CONCLUSION:** SLT use caused over 350,000 deaths in India in 2010, and nearly three-fifth of SLT use-attributable deaths were among women in India. This calls for targeted public health intervention focusing on SLT products especially among women.

PMID: 25526253 [PubMed - in process]

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**Abstract**

**BACKGROUND:** Tobacco smoking and binge alcohol drinking are two of the leading risk factors for premature mortality worldwide. In India, studies have examined the geographic distributions of tobacco smoking and alcohol drinking only at the state-level; sub-state variations and the spatial association between the two consumptions are poorly understood.

**METHODOLOGY:** We used data from the Special Fertility and Mortality Survey conducted in 1998 to examine the geographic distributions of tobacco smoking and alcohol drinking at the district and postal code levels. We used kriging interpolation to generate smoking and drinking distributions at the postal code level. We also examined spatial autocorrelations and identified spatial clusters of high and low prevalence of smoking and drinking. Finally, we used bivariate analyses to examine the spatial correlations between smoking and drinking, and between cigarette and bidi smoking.

**RESULTS:** There was a high prevalence of any smoking in the central and northeastern states, and a high prevalence of any drinking in Himachal Pradesh, Arunachal Pradesh, and eastern Madhya Pradesh. Spatial clusters of early smoking (started smoking before age 20) were identified in the central states. Cigarette and bidi smoking showed distinctly different geographic patterns, with high levels of cigarette smoking in the northeastern states and high levels of bidi smoking in the central states. The geographic pattern of bidi smoking was similar to early smoking. Cigarette smoking was spatially associated with any drinking. Smoking prevalences in 1998 were correlated with prevalences in 2004 at the district level and 2010 at the state level.

**CONCLUSION:** These results along with earlier evidence on the complementarities between tobacco smoking and alcohol drinking suggest that local public health action on smoking might also help to reduce alcohol consumption, and vice versa. Surveys that properly represent tobacco and alcohol consumptions at the district level are recommended.

PMID: 25025379 [PubMed - in process] PMCID: PMC4099149

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**Abstract**

Cancer can have profound social and economic consequences for people in India, often leading to family impoverishment and societal inequity. Reported age-adjusted incidence rates for cancer are still quite low in the demographically young country. Slightly more than 1 million new cases of cancer are diagnosed every year in a population of 1.2 billion. In age-adjusted terms this represents a combined male and female incidence of about a
An annotated bibliography of scientific studies done on tobacco topic in WHO South-East Asia Region countries

quarter of that recorded in western Europe. However, an estimated 600,000-700,000 deaths in India were caused by cancer in 2012. In age-standardised terms this figure is close to the mortality burden seen in high-income countries. Such figures are partly indicative of low rates of early-stage detection and poor treatment outcomes. Many cancer cases in India are associated with tobacco use, infections, and other avoidable causes. Social factors, especially inequalities, are major determinants of India's cancer burden, with poorer people more likely to die from cancer before the age of 70 years than those who are more affluent. In this first of three papers, we examine the complex epidemiology of cancer, the future burden, and the dominant sociopolitical themes relating to cancer in India.

PMID:24731885[PubMed - indexed for MEDLINE]


Abstract

This study sought to summarize the findings of the GBD 2010 (Global Burden of Diseases, Injuries, and Risk Factors) study for ischemic stroke (IS) and to report the impact of tobacco smoking on IS burden in specific countries. The GBD 2010 searched multiple databases to identify relevant studies published between 1990 and 2010. The GBD 2010 analytical tools were used to calculate region-specific IS incidence, mortality, mortality-to-incidence ratio, and disability-adjusted life years (DALY) lost, including 95% uncertainty intervals (UI). In 2010, there were approximately 11,569,000 incident IS events (63% in low- and middle-income countries [LMIC]), approximately 2,835,000 deaths from IS (57% in LMIC), and approximately 39,389,000 DALY lost due to IS (64% in LMIC). From 1990 to 2010, there was a significant increase in global IS burden in terms of absolute number of people with incident IS (37% increase), deaths from IS (21% increase), and DALY lost due to IS (18% increase). Age-standardized IS incidence, DALY lost, mortality, and mortality-to-incidence ratios in high-income countries declined by about 13% (95% UI: 6% to 18%), 34% (95% UI: 16% to 36%), and 37% (95% UI: 19% to 39%), 21% (95% UI: 10% to 27%), respectively. However, in LMIC there was a modest 6% increase in the age-standardized incidence of IS (95% UI: -7% to 18%) despite modest reductions in mortality rates, DALY lost, and mortality-to-incidence ratios. There was considerable variability among country-specific estimates within broad GBD regions. China, Russia, and India were ranked highest in both 1990 and 2010 for IS deaths attributable to tobacco consumption. Although age-standardized IS mortality rates have declined over the last 2 decades, the absolute global burden of IS is increasing, with the bulk of DALY lost in LMIC. Tobacco consumption is an important modifiable risk factor for IS, and in both 1990 and 2010, the top ranked countries for IS deaths that could be attributed to tobacco consumption were China, Russia, and India. Tobacco control policies that target both smoking initiation and smoking cessation can play an important role in the prevention of IS. In China, Russia, and India, even modest reductions in the number of current smokers could see millions of lives saved due to prevention of IS alone.

PMID: 25432120 [PubMed - as supplied by publisher]


Abstract

In most parts of the world, tobacco is used for smoking, whereas, in India, tobacco is used for smoking as well as in diverse smokeless forms. Absorption of toxic and carcinogenic chemicals in tobacco and other ingredients added to various products are causally associated with several non-communicable diseases including cancer, especially oral cancer, which is the leading cancer among men and the third most common cancer among women in India. This article highlights the toxicity, mutagenecity and carcinogenic effects of hazardous chemicals present in smokeless tobacco products. This endeavor was based on the extensive review of literature from various sources. The SLT products have influence on cellular metabolism, ability to cause DNA damage, and cancer in experimental animals. It is, therefore, essential to consider the collective role of chemical constituents of SLT products in the causation of adverse effect on human health.

PMID:23442400[PubMed - indexed for MEDLINE]

Abstract

The aim of the present study was to examine the association between alcohol, alcohol and tobacco, and mortality in a large adult population in the city of Mumbai. A total of 35,102 men aged 45 years and older were surveyed about their alcohol drinking as part of a cohort study. These respondents were followed up over time, and all deaths were recorded. Compared with those who never drank alcohol, alcohol drinkers had 1.22 times higher risk of mortality, with the highest risk observed for liver disease (hazard ratio [HR]=3.19). Among ever drinkers, risk of mortality varied according to types (country/desi), frequency (four or less times a week, HR=1.39), and quantity of alcohol consumed (>100 mL) per day. In addition, country/desi drinkers (HR=1.34) had the highest mortality risk compared with all other types of alcohol (HR=0.97). Alcohol drinkers had increased risk of mortality for tuberculosis (HR=2.53), cerebrovascular disease (HR=1.83), and liver disease (HR=3.19). Synergistic joint effect of tobacco and alcohol on mortality was also observed, with lowest risk in never tobacco user drinkers (HR=1.02) and highest in mixed tobacco user drinkers (HR=1.79). The results of this study show a direct association between greater consumption of alcohol and increased risk of mortality from alcohol-specific causes. In addition to individual effect, this study demonstrates the synergistic interaction between alcohol and tobacco use in various forms on mortality.

PMID: 21908155 [PubMed - indexed for MEDLINE]


Abstract

BACKGROUND: The age-specific mortality rates and total deaths from specific cancers have not been documented for the various regions and subpopulations of India. We therefore assessed the cause of death in 2001-03 in homes in small areas that were chosen to be representative of all the parts of India.

METHODS: At least 130 trained physicians independently assigned causes to 122,429 deaths, which occurred in 1·1 million homes in 6671 small areas that were randomly selected to be representative of all of India, based on a structured non-medical surveyor's field report.

FINDINGS: 7137 of 122,429 study deaths were due to cancer, corresponding to 556,400 national cancer deaths in India in 2010. 395,400 (71%) cancer deaths occurred in people aged 30-69 years (200,100 men and 195,300 women). At 30-69 years, the three most common fatal cancers were oral (including lip and pharynx, 45,800 [22-9%]), stomach (25,200 [12-6%]), and lung (including trachea and larynx, 22,900 [11-4%]) in men, and cervical (33,400 [17-1%]), stomach (27,500 [14-1%]), and breast (19,900 [10-2%]) in women. Tobacco-related cancers represented 42-0% (84,000) of male and 18-3% (35,700) of female cancer deaths and there were twice as many deaths from oral cancers as lung cancers. Age-standardised cancer mortality rates per 100,000 were similar in rural (men 95-6 [99% CI 89-6-101-7] and women 96-6 [90-7-102-6]) and urban areas (men 102-4 [92-7-112-1] and women 91-2 [81-9-100-5]), but varied greatly between the states, and were two times higher in the least educated than in the most educated adults (men, illiterate 106-6 [97-4-115-7] vs most educated 45-7 [37-8-53-6]; women, illiterate 106-7 [99-9-113-6] vs most educated 43-4 [30-7-56-1]). Cervical cancer was far less common in Muslim than in Hindu women (study deaths 24, age-standardised mortality ratio 0·68 [0·64-0·71] vs 340, 1·06 [1·05-1·08]).

INTERPRETATION: Prevention of tobacco-related and cervical cancers and earlier detection of treatable cancers would reduce cancer deaths in India, particularly in the rural areas that are underserved by cancer services. The substantial variation in cancer rates in India suggests other risk factors or causative agents that remain to be discovered.

PMID: 22460346 [PubMed - indexed for MEDLINE]

Abstract

BACKGROUND: Reduction in pulmonary function, as estimated by forced expiratory volume in 1 s (FEV (1)), has been found to predict all-cause mortality in developed-country populations. This study was designed to examine the association between FEV (1) and mortality in an urban developing-country population.

METHODS: Data from the large, well-characterized Mumbai Cohort Study (Maharashtra, India) were used to compute hazard ratios (HRs; deaths/100-ml FEV(1)) and 95% confidence intervals (CIs) from Cox proportional hazards regression models in which age, tobacco use, education, height and relative body weight were controlled.

RESULTS: A total of 13,261 deaths occurred in this cohort of 148,173 individuals. After controlling for important covariates, there was a 1.7% reduction in risk of overall death in women for each 100-ml increment in FEV (1) (HR = 0.983; 95% CI = 0.980-0.986) and a 1.5% reduction in men (HR = 0.985; 95% CI = 0.984-0.986). There was a 1.6% reduction in cancer deaths in women (HR = 0.984; 95% CI = 0.973-0.996) and a 0.8% reduction in men (HR = 0.992; 95% CI = 0.987-0.997). The largest reductions in women were observed in tuberculosis deaths (3.7%/100-ml increment in FEV (1)), and in men in respiratory system deaths (3.2%).

CONCLUSIONS: In a densely populated urban Indian population, FEV (1) predicted overall and cancer mortality. Effects were larger in women and were not attenuated by exclusion of smokers or restricting analyses to subjects dying >2 years from recruitment. Because FEV(1) may be affected by air pollution, which is worsening in urban areas of most developing countries, further research is recommended to deepen understanding of these factors in relation to mortality.

PMID: 20846948 [PubMed - indexed for MEDLINE] PMCID: PMC3031342


Abstract

OBJECTIVE: To measure and compare the breath carbon monoxide (CO) levels in cigarette and bidi smokers in India.

METHODS: Breath CO was measured in 389 smokers (241 cigarette smokers, 148 bidi smokers) using portable breath CO analyser (Bedfont-England, Smokelyzer). Tobacco contents and length of single stick of different brands of cigarette and bidi were also measured.

RESULTS: Their mean age was 38.7 +/- 13.4 years. The average duration of smoking was 18.2 +/- 13.0 years. Average breath CO levels were 15.6 +/- 7.0 ppm in smokers and 4.07 +/- 1.16 ppm in non-smokers. Average breath CO level was significantly higher in bidi smokers (18.9 +/- 7.7 ppm) compared to cigarette smokers (13.6 +/- 5.8 ppm) when total consumption of cigarette/bidi was more than five pack-years (p = 0.002). Average tobacco weight of bidi (216.8 mg) was significantly less than cigarette (696 mg).

CONCLUSIONS: Bidi is equally or more harmful than cigarette smoking. One bidi may be considered to one cigarette for calculating "pack-years" of smoking.

PMID:20364610[PubMed - indexed for MEDLINE]

Abstract

BACKGROUND: India is in the midst of an epidemiological transition with non-communicable diseases increasing in importance. Targeting the risk factors for non-communicable diseases is recognized as an essential preventive strategy. There is lack of good quality data on prevalence of risk factors. The present study addresses this challenge in urban population of Ballabgarh town in Faridabad district of Haryana.

METHODS: A total of 1263 male and 1326 female respondents were selected using multistage systematic random sampling, in 5 age groups of 10 years (15-24, 25-34, 35-44, 45-54 and 55-64). The World Health Organization's STEPS approach entails stepwise collection of the risk factor data based on standardized questionnaires (step 1), basic physical measures in step 2 and finally in 3rd step, basic biochemical investigations such as blood sugar and cholesterol. The prevalence was adjusted to the age and sex strata of urban Faridabad as per census 2001.

RESULTS: The prevalence of current daily use of smoked tobacco was 22.2% (95% CI: 20.0-24.6) for males and 1.4% (95% CI: 0.9-2.2) for females. In males the prevalence of current alcohol consumption was 28.9% (95% CI: 26.4-31.5). Physical inactivity was reported by 23.2% (95% CI: 20.9-25.6) of males and 52.4% (95% CI: 49.7-55.1) of female respondents. Only 8.6% of males and 4.4% of females were consuming adequate portions of the fruits and vegetables. 23.1% (95% CI: 20.8-25.5) males and 15.7% (95% CI: 13.8-17.8) females were either in Stage 1 and 2 hypertension (JNC VII) or were taking anti-hypertensives. Among males, 25.4% (95% CI: 23.0-27.9) and, among females 34.9% (95% CI: 32.3-37.6) were overweight.

CONCLUSION: The prevalence of tobacco and alcohol use among males and physical inactivity among females was high. Low consumption of fruits and vegetables, hypertension and overweight was equally common among both the sexes in the population studied. Thus there is an urgent need for initiating measures at the risk factor level to counter this modern day epidemic of non-communicable disorders, within this urban community.

PMID: 19212016 [PubMed - indexed for MEDLINE]


Abstract

BACKGROUND: Noncommunicable diseases have become a public health problem in India concomitant with economic development, leading to increases in tobacco consumption, obesity, and changes in diet and lifestyle. Although observation suggests that tobacco consumption is a major risk factor for deaths due to circulatory, pulmonary, and malignant diseases, such studies are not available from most populations in developing countries.

SUBJECTS AND METHODS: For the period 1999-2001, we studied the randomly selected records of death of 2222 (1385 men and 837 women), aged 25-64 years, out of 3034 death records overall from the records at Municipal Corporation, Moradabad. All the families of these deceased could be contacted individually to find out the causes of death, by scientist/doctor administered, informed consented, verbal autopsy questionnaire, completed with the help of the spouse and local treating doctor practicing in the appropriate healthcare region. Social classes and tobacco intakes were assessed by a questionnaire.

RESULTS: The prevalence of tobacco consumption, including chewing + smoking, were 45% (n = 623) among men and 15% (n = 125) among women decedents. However, smoking was observed in 20% and tobacco chewing in 30% of male decedents, while only 6% of female decedents smoked and 10% chewed tobacco. Social class had no impact on tobacco consumption in men but did influence one subgroup >55 years among women, ie, among those who had the highest tobacco consumption. Tobacco intakes were significantly more common among decedents dying due to circulatory, malignant, and pulmonary diseases, compared with other causes (men 61.1%, 76.6%, pulmonary 77.3% vs 31%, P < 0.001; women 27.5%, 75.9%, pulmonary 24.6% vs 0.42%, P < 0.001) of mortality, respectively. Pulmonary causes included chronic bronchitis and asthma. Circulatory diseases (29.1%, n = 646) including heart attacks (10.0%), stroke (7.8%), valvular heart disease (7.2%, n = 160), sudden cardiac death and inflammatory cardiac disease, each (2.0%, n = 44) were the second most common causes of deaths, after infections (41.1%, n = 915). Malignant neoplasm (5.8%, n = 131), injury (14.0%, n = 313), and miscellaneous causes of deaths, including diabetes mellitus (2.2%, n = 49) were noted in 9.1%, (n = 202) of death records. Cancers of the lung (1.6%), oral cavity (1.5%), liver (1.1%), stomach (0.9%), breast (0.31%), uterus, cervix, and ovary (0.27%) were relatively common causes for deaths due to malignancy.
CONCLUSIONS: This study shows that tobacco consumption appears to be a major contributor to deaths due to circulatory diseases and malignant diseases in India. Social class status had little impact on tobacco consumption in male decedents. Rapid changes in diet and lifestyle, increases in tobacco consumption, and possibly aging of the population, appear to be strongly associated with mortality due to cardiovascular diseases and cancer in this middle-income country.

PMID:18044690[PubMed - indexed for MEDLINE] PMCID:PMC2695616


Abstract

BACKGROUND: Non-communicable diseases have modifiable risk factors, which are easy to measure and can help in planning effective interventions. We established a community-based sentinel surveillance to estimate the prevalence and level of common risk factors for major non-communicable diseases as part of a joint Indian Council of Medical Research/WHO initiative.

METHODS: This survey was done from February 2003 to June 2004 and included 1260 men and 1304 women 15-64 years of age living in urban slum areas of Ballabgarh block, Faridabad district, Haryana. A list of all slums in Ballabgarh block was obtained from the Municipal Corporation of Faridabad. Slums were selected by stratified cluster sampling. All households in the selected slums were visited and men and women interviewed in alternate households. The study instrument was based on the STEPS approach of WHO. It included questions related to tobacco use, alcohol intake, diet, physical activity, and history of treatment for hypertension and diabetes mellitus. Height, weight, waist circumference and blood pressure were measured. To estimate prevalence at the population level, age adjustment was done using the urban Faridabad population structure from the 2001 Census of India.

RESULTS: The age-adjusted prevalence of smoking among men was 36.5% compared with 7% in women. Bidi was the predominant form of smoked tobacco used. The use of smokeless tobacco was reported by 10.2% of men and 2.9% of women. While 26% of men reported consuming alcohol in the past 1 year, none of the women did. The mean number of servings per day of fruits and vegetables was 2.7 for men compared with 2.2 for women. Overall, only 7.9% and 5.4% of men and women, respectively took > or = 5 servings per day of fruits and vegetables. Women were more likely to be physically inactive compared with men (14.8% v. 55%); 67% of men and 22.8% of women reported mean physical activity > 150 minutes per week. The mean body mass index (BMI) was lower in men than in women (20.9 v. 21.9 kg/m2). The prevalence of overweight (BMI > or = 25 kg/m2)) was 16% among men and 21.9% among women. The prevalence of hypertension (blood pressure > or = 140/> or = 90 mmHg or on an antihypertensive drug) was 17.2% in men and 15.8% in women.

CONCLUSION: The high prevalence of risk factors for noncommunicable diseases across all age groups in this urban slum community indicates the likelihood of a high future burden of illness. Immediate action for prevention and control is required to prevent the situation from worsening.

PMID:17867614[PubMed - indexed for MEDLINE]


No abstract available

PMID: 16756205 [PubMed - indexed for MEDLINE]

Abstract

**BACKGROUND:** Over 75% of the annual estimated 9.5 million deaths in India occur in the home, and the large majority of these do not have a certified cause. India and other developing countries urgently need reliable quantification of the causes of death. They also need better epidemiological evidence about the relevance of physical (such as blood pressure and obesity), behavioral (such as smoking, alcohol, HIV-1 risk taking, and immunization history), and biological (such as blood lipids and gene polymorphisms) measurements to the development of disease in individuals or disease rates in populations. We report here on the rationale, design, and implementation of the world's largest prospective study of the causes and correlates of mortality.

**METHODS AND FINDINGS:** We will monitor nearly 14 million people in 2.4 million nationally representative Indian households (6.3 million people in 1.1 million households in the 1998-2003 sample frame and 7.6 million people in 1.3 million households in the 2004-2014 sample frame) for vital status and, if dead, the causes of death through a well-validated verbal autopsy (VA) instrument. About 300,000 deaths from 1998-2003 and some 700,000 deaths from 2004-2014 are expected; of these about 850,000 will be coded by two physicians to provide causes of death by gender, age, socioeconomic status, and geographical region. Pilot studies will evaluate the addition of physical and biological measurements, specifically dried blood spots. Preliminary results from over 35,000 deaths suggest that VA can ascertain the leading causes of death, reduce the misclassification of causes, and derive the probable underlying cause of death when it has not been reported. VA yields broad classification of the underlying causes in about 90% of deaths before age 70. In old age, however, the proportion of classifiable deaths is lower. By tracking underlying demographic denominators, the study permits quantification of absolute mortality rates. Household case-control, proportional mortality, and nested case-control methods permit quantification of risk factors.

**CONCLUSIONS:** This study will reliably document not only the underlying cause of child and adult deaths but also key risk factors (behavioral, physical, environmental, and eventually, genetic). It offers a globally replicable model for reliably estimating cause-specific mortality using VA and strengthens India's flagship mortality monitoring system. Despite the misclassification that is still expected, the new cause-of-death data will be substantially better than that available previously.

Comment in


PMID:16354108[PubMed - indexed for MEDLINE] PMCID:PMC1316066


Abstract

**BACKGROUND:** Little is known about the excess mortality from forms of tobacco use other than cigarette smoking that are widely prevalent in India, such as bidi smoking and the various forms of smokeless tobacco use. We report on absolute and relative risks of mortality among various kinds of ever tobacco users vs never-users in the city of Mumbai, India.

**METHODS:** Using the Mumbai voters' list as the selection frame, 99 570 individuals aged \( \geq 35 \) years were interviewed at their homes during 1992-94. At active follow-up (during 1997-99) after 5.5 years, 97 244 (97.7%) were traced. Among these, 7531 deaths (4119 men, 3412 women) were recorded, of which 89% died within study area. It was possible to abstract cause of death information from the records of the municipal corporation for 5470 deaths. These were coded using ICD 10.

**RESULTS:** The adjusted relative risk was 1.37 (95% CI 1.23-1.53) for (men) cigarette smokers and 1.64 (95% CI 1.47-1.81) for bidi smokers, with a significant dose-response relationship for number of bids or cigarettes smoked. Women were essentially smokeless tobacco users; the adjusted relative risk was 1.25 (95% CI 1.15-1.35). The risk of deaths from respiratory diseases (RR 2.12, 95% CI 1.57-2.87), tuberculosis (RR 2.30, 95% CI 1.68-3.15), and neoplasms (RR 2.60, 95% CI 1.78-3.80) were significantly high in male smokers than never tobacco users.
CONCLUSIONS: Bidi is no less hazardous than cigarette smoking, and smokeless tobacco use may also result in significantly increased mortality.

PMID: 16249218 [PubMed - indexed for MEDLINE]


Abstract

BACKGROUND: Smoking has been causally associated with increased mortality from several diseases, and has increased considerably in many developing countries in the past few decades. Mortality attributable to smoking in the year 2000 was estimated for adult males and females, including estimates by age and for specific diseases in 14 epidemiological sub regions of the world.

METHODS: Lung cancer mortality was used as an indirect marker of the accumulated hazard of smoking. Never-smoker lung cancer mortality was estimated based on the household use of coal with poor ventilation. Estimates of mortality caused by smoking were made for lung cancer, upper aerodigestive cancer, all other cancers, chronic obstructive pulmonary disease (COPD), other respiratory diseases, cardiovascular diseases, and selected other medical causes. Estimates were limited to ages 30 years and above.

RESULTS: In 2000, an estimated 4.83 million premature deaths in the world were attributable to smoking, 2.41 million in developing countries and 2.43 million in industrialised countries. There were 3.84 million male deaths and 1.00 million female deaths attributable to smoking. 2.69 million smoking attributable deaths were between the ages of 30-69 years, and 2.14 million were 70 years of age and above. The leading causes of death from smoking in industrialised regions were cardiovascular diseases (1.02 million deaths), lung cancer (0.52 million deaths), and COPD (0.31 million deaths), and in the developing world cardiovascular diseases (0.67 million deaths), COPD (0.65 million deaths), and lung cancer (0.33 million deaths). The share of male and female deaths and younger and older adult deaths, and of various diseases in total smoking attributable deaths exhibited large inter-regional heterogeneity, especially in the developing world.

CONCLUSIONS: Smoking was an important cause of global mortality in 2000, affecting a large number of diseases. Age, sex, and disease patterns of smoking-caused mortality varied greatly across regions, due to both historical and current smoking patterns, and the presence of other risk factors that affect background mortality from specific diseases.

PMID: 15564623 [PubMed - indexed for MEDLINE] PMCID: PMC1747946


Abstract

Betel quid chewing is an ancient practice common in many countries of Asia and among migrated communities in Africa, Europe and North America. It enjoys complete social acceptance in many societies and is also popular among women. In its most basic form, betel quid consists of betel leaf (Piper betel), areca nut, the main psychoactive ingredient, and slaked lime (calcium hydroxide). Areca nut is said to be the fourth most commonly used psychoactive substance in the world, after caffeine, nicotine and alcohol. There are a great variety of ingredients and ways of preparing betel quid in different countries. In some, particularly in India, tobacco is added to the quid. In recent years, commercially-manufactured non-perishable forms of betel quid (pan masala or betel quid mixtures and gutka), not containing betel leaf, have been marketed. Within a short period of about 2 decades, this industry has risen in value to several hundred US million dollars. Use of areca nut in any form is not safe for oral health; the use of commercially manufactured forms seems even riskier.

PMID:15389304[PubMed - indexed for MEDLINE]

CONCLUSIONS:

and younger and older adult deaths, and of various diseases in total smoking attributable deaths exhibited large deaths), COPD (0.65 million deaths), and lung cancer (0.33 million deaths). The share of male and female deaths (0.31 million deaths), and in the developing world cardiovascular diseases (0.67 million deaths).

CONCLUSIONS:

Smoking in industrialised regions were cardiovascular diseases (1.02 million deaths), lung cancer (0.52 million deaths), and obstructive pulmonary disease (COPD), other respiratory diseases, cardiovascular diseases, and selected other smoker lung cancer mortality was estimated based on the household use of coal with poor ventilation. Estimates increased considerably in many developing countries in the past few decades. Mortality attributable to smoking in the year 2000 was estimated for adult males and females, including estimates by age and for specific diseases in India.

RESULTS:

Abstract

A pilot survey was conducted based on 900 respondents of the population of West Bengal to assess their level of awareness regarding cancer with the aim of estimating associations between response variables (knowledge about cancer) and predictor variables (age, sex, level of education). The data of the pilot survey revealed that 98% of the respondents had heard of the disease ‘Cancer’. Unfortunately only 35% of the respondents were aware of the 7-danger signals (i.e., the primary symptoms of cancer) as defined by the World Health Organisation (WHO). None of the respondents knew all 7-primary symptoms of cancer and the majority (about 88%) knew only one or two (mainly tumour lumps and ulcers). Only 44.67% were aware of the major risk factors (like smoking and tobacco chewing). The percentage of the respondents believing that most cancers are curable in early stages was 58%. Some of the respondents (21%) expressed the vague idea that cancer is an infectious disease which is creating a problem of isolation from the family/society with some unfortunate cancer patients. Over 11% of the respondents suggested that a cancer diagnosis should be kept secret from neighbours due to some social stigma like problems with daughters’ marriage. Only 8% had experienced any cancer awareness programme conducted by any organisation, only 37% had listened to any cancer awareness programme conducted by the All India Radio, only 36% had seen any cancer awareness programme conducted by Doordarsan/private Television channels, only 34% had read cancer awareness articles in the newspapers/magazines and only 13% had seen posters/hoardings regarding cancer awareness. The results thus revealed a huge lack regarding cancer awareness in the region. Most of the respondents (68%) expressed a wish for starting cancer awareness programmes. From the Pilot Survey it has been found that the average Knowledge Index of the respondents is 58+ 1.7 irrespective of the socio-economic and personal status. On testing of associations, there was no statistically significant association of the Knowledge Index with the domicile status (rural or urban), sex, occupation and religion of the respondents. However, statistically significant links were evident with the level of education (p=0.00001), social participation (p=0.00004) and income (p=0.00013) of the respondents.

PMID: 15244526 [PubMed - indexed for MEDLINE]


Abstract

South Asia is a major producer and net exporter of tobacco. Over one-third of tobacco consumed regionally is smokeless. Traditional forms like betel quid, tobacco with lime and tobacco tooth powder are commonly used and the use of new products is increasing, not only among men but also among children, teenagers, women of reproductive age, medical and dental students and in the South Asian diaspora. Smokeless tobacco users studied prospectively in India had age-adjusted relative risks for premature mortality of 1.2-1.96 (men) and 1.3 (women). Current male chewers of betel quid with tobacco in case-control studies in India had relative risks of oral cancer varying between 1.8-5.8 and relative risks for oesophageal cancer of 2.1-3.2. Oral submucous fibrosis is increasing due to the use of processed areca nut products, many containing tobacco. Pregnant women in India who used smokeless tobacco have a threefold increased risk of stillbirth and a two- to threefold increased risk of having a low birthweight infant. In recent years, several states in India have banned the sale, manufacture and storage of gutka, a smokeless tobacco product containing areca nut. In May 2003 in India, the Tobacco Products Bill 2001 was enacted to regulate the promotion and sale of all tobacco products. In two large-scale educational interventions in India, sizable proportions of tobacco users quit during 5-10 years of follow-up and incidence rates of oral leukoplakia measured in one study fell in the intervention cohort. Tobacco education must be imparted through schools, existing government health programmes and hospital outreach programmes.

PMID:14708551[PubMed - indexed for MEDLINE]


Abstract

BACKGROUND & OBJECTIVES: Of the various biochemical markers used to validate the smoking status of a person, nicotine and cotinine are considered as good markers for both active and passive smoking. In the present study an attempt was made to estimate urinary levels of nicotine and cotinine in healthy individuals from north India using different types of tobacco to identify and validate the smoking status.
**METHODS:** Twenty four hour urine sample of 130 healthy volunteers (smokers=70, passive smokers=20, tobacco chewers=20, non smokers=20) were analyzed by high-pressure liquid chromatography (HPLC) assay. Smokers were divided into different groups, viz., cigarette, bidi and hooka smokers.

**RESULTS:** The mean values of nicotine (ng/ml) and cotinine (ng/ml) in urine were highest in cigarette smokers (nicotine=703.50+/-304.34; cotinine=2736.20+/-983.29), followed by hooka smokers (nicotine 548.0+/-103.47 and cotinine 2379.0+/-424.25), and bidi smokers (nicotine=268.53+/ -97.62, cotinine=562.60+/-249.38). There was no correlation of nicotine or cotinine values with smoking index. In passive smokers (nicotine=109.75+/ -22.33, cotinine=280.75+/ -86.30) and in nonsmokers, the values were much lower (nicotine=55.00+/ -13.71, cotinine=7.30+/-2.47) compared to smokers. In tobacco chewers, the values for nicotine and cotinine were 447.75+/-145.09 and 2178.30+/ -334.29 respectively.

**INTERPRETATION & CONCLUSION:** All forms of tobacco users had significantly higher values compared to passive smokers and nonusers. Thus, cotinine and nicotine levels in urine may be considered as good indicators to assess the exposure to tobacco in our population.

PMID:14700346[PubMed - indexed for MEDLINE]

### 2.1. All Cancers related to tobacco use


**Abstract**

**BACKGROUND:** An assessment of cancer incidence in population is required for prevention, early diagnosis, treatment and resource allocation. This will also guide in the formation of facilities for diagnosis, treatment, rehabilitation and follow-up for these patients. The demographic trend of cancer will help to identify common types and etiological factors. Efforts at clinical, research and administrative levels are needed to overcome this problem.

**SETTINGS AND DESIGN:** Present retro prospective study was conducted in regional cancer center of a tertiary care hospital.

**MATERIALS AND METHODS:** After permission from ethics committee, a retro prospective study of 1 year duration was undertaken to study the profile of cancer patients and to compare it with other cancer registries in India.

**STATISTICAL ANALYSIS:** Pearson's Chi-square test and simple linear regression were used. Statistical Package for the Social Sciences version-16 (University of Bristol information services (www.bristol.ac.uk/is/learning/resources) was used.

**RESULTS:** The overall incidence of cancer in Kashmir is on the increase and common sites of cancer are esophagus and gastroesophageal (GE) junction, lung, stomach, colorectal, lymphomas, skin, laryngopharynx, acute leukemias, prostate and brain in males. In females common sites are breast, esophagus and GE junction, ovary, colorectal, stomach, lung, gallbladder, lymphomas, acute leukemias and brain.

**CONCLUSION:** Cancers of esophagus, stomach and lungs have a high incidence both in men and women in Kashmir. Future studies on sources and types of environmental pollution and exposures in relation to these cancers may improve our understanding of risk factors held responsible for causation of these malignancies in this region. This will help in the allocation of available resources for prevention and treatment strategies.

PMID:25104194[PubMed - in process]

Abstract

A trend of change has been observed in the incidence pattern of cancer. The incidence of cancer has been slowly declining in the developed countries, but increasing in the less developed and developing countries. Smoking prevalence in the developing countries is now much higher compared to the developed countries, contributing to almost half of all the cancers among males in developing countries. Lung cancers are increasing rapidly in Kolkata and West Bengal, whereas head and neck cancer has shown a declining trend. Proportion of gastro-intestinal cancers is increasing in West Bengal. Lifestyle change, inactivity, intake of calorie-dense food, obesity may have a reflection over some of these cancers. Breast cancers are now the commonest cancer of females of West Bengal in contrast to rest of India except Mumbai. Incidence of cancer of cervix has grossly declined in the city of Kolkata, but not in rural Bengal.

PMID:23785916[PubMed - indexed for MEDLINE]


Abstract

OBJECTIVE: Bidis are hand-rolled cigarettes commonly smoked in South Asia and are marketed to Western populations as a safer alternative to conventional cigarettes. This study examined the association between bidis and other forms of tobacco use on cancer incidence in an urban developing country population.

METHODS: Using data from the large, well-characterized Mumbai cohort study, adjusted hazard ratios (HRs) and 95% confidence intervals (CIs) were computed from Cox proportional hazards regression models in order to compare the relative effect of various forms of tobacco use on cancer incidence.

RESULTS: During 649,228 person-years of follow-up 1,267 incident cancers occurred in 87,222 male cohort members. Incident oral cancer in bidi smokers (HR = 3.55; 95% CI = 2.40, 5.24) was 42% higher than in cigarette smokers (HR = 2.50; 95% CI = 1.65, 3.78). For all respiratory and intrathoracic organs combined, the increase was 69% (HR = 5.54; 95% CI = 3.46, 8.87 vs. HR = 3.28; 95% CI = 1.99, 5.39); for lung and larynx, the increases were 35 and 112%, respectively. Smokeless tobacco use was associated with cancers of the lip, oral cavity, pharynx, digestive, respiratory, and intrathoracic organs.

CONCLUSIONS: Despite marketing claims to the contrary, we found that smokeless tobacco use and bidi smoking are at least as harmful as cigarette smoking for all incident cancers and are associated with increased risk of oral and respiratory/intrathoracic cancers.

PMID: 21431915[PubMed - indexed for MEDLINE] PMCID: PMC3756904


Abstract

BACKGROUND: Tobacco use and body mass are major risk factors for many cancers. Despite this, very little is known about their combined effect on cancer mortality. These relationships are virtually unexplored in populations having patterns of both tobacco use and body habitus atypical of those typically enrolled in epidemiologic studies.

METHODS: A prospective cohort study of 148,173 men and women aged > or =35 years was conducted in Mumbai, India. Subjects were recruited during 1991-1997, measured for a variety of risk factors, including tobacco use and anthropometry, and then followed for approximately 5-6 years.

RESULTS: During 774,129 person-years of follow up, a total of 796 cancer deaths were observed. Tobacco use, especially smoking in men, was associated with particularly high risk of death in extreme categories of body mass. At highest risk were underweight smoking males [hazard ratio (HR) =9.45, 5.87, and 5.75 for those
smokers who were extremely thin (<16.0 kg/m²), very thin (16.0 to <17.0 kg/m²), or thin (17.0 to <18.5), respectively]. Significant effects of underweight among never and smokeless tobacco users disappeared with exclusion of individuals with < or =2 years of follow up. Extremely thin (<16.0 kg/m²) women smokeless tobacco users had an elevation in risk, HR=2.95, that actually appeared to increase (to 3.21) with exclusion of individuals who were diagnosed within 2 years of follow up.

CONCLUSION: Tobacco use and under nutrition are known to be serious problems in developing countries. The current study underlines the strikingly elevated risk of cancer when they occur together.

PMID: 19854693 [PubMed - indexed for MEDLINE]


Abstract

BACKGROUND: The nationwide effects of smoking on mortality in India have not been assessed reliably.

METHODS: In a nationally representative sample of 1.1 million homes, we compared the prevalence of smoking among 33,000 deceased women and 41,000 deceased men (case subjects) with the prevalence of smoking among 35,000 living women and 43,000 living men (unmatched control subjects). Mortality risk ratios comparing smokers with nonsmokers were adjusted for age, educational level, and use of alcohol.

RESULTS: About 5% of female control subjects and 37% of male control subjects between the ages of 30 and 69 years were smokers. In this age group, smoking was associated with an increased risk of death from any medical cause among both women (risk ratio, 2.0; 99% confidence interval [CI], 1.8 to 2.3) and men (risk ratio, 1.7; 99% CI, 1.6 to 1.8). Daily smoking of even a small amount of tobacco was associated with increased mortality. Excess deaths among smokers, as compared with nonsmokers, were chiefly from tuberculosis among both women (risk ratio, 3.0; 99% CI, 2.4 to 3.9) and men (risk ratio, 2.3; 99% CI, 2.1 to 2.6) and from respiratory, vascular, or neoplastic disease. Smoking was associated with a reduction in median survival of 8 years for women (99% CI, 5 to 11) and 6 years for men (99% CI, 5 to 7). If these associations are mainly causal, smoking in persons between the ages of 30 and 69 years is responsible for about 1 in 20 deaths of women and 1 in 5 deaths of men. In 2010, smoking will cause about 930,000 adult deaths in India; of the dead, about 70% (90,000 women and 580,000 men) will be between the ages of 30 and 69 years. Because of population growth, the absolute number of deaths in this age group is rising by about 3% per year.

CONCLUSIONS: Smoking causes a large and growing number of premature deaths in India

PMID: 18272886 [PubMed - indexed for MEDLINE]


Erratum in


Abstract

The joint effects of tobacco use and body mass on mortality have not been well characterized, although evidence regarding the effect of smoking on the association between body mass and mortality is accumulating. To study the joint effects of these important risk factors, the authors conducted a prospective cohort study of 148,173 men and women aged > or =35 years in Mumbai, India. Subjects were recruited during 1991-1997 and then followed for approximately 5-6 years (1997-2003). During 774,129 person-years of follow-up, 13,261 deaths were observed. Tobacco use increased the risk of death across different categories of body mass, with particularly
high risks being observed in extreme body mass categories. Among men, obese smokers and obese never users of tobacco were at 56% and 34% increased risks of death, respectively, compared with overweight never users of tobacco. Similarly, at highest risk were extremely thin males who smoked bidis (relative risk = 3.45) or cigarettes (relative risk = 3.32). Body mass and all forms of tobacco use had independent as well as multiplicative joint effects on mortality risk. Tobacco use and under nutrition are serious problems in India. The current study indicates that obesity may emerge as a serious public health problem with which tobacco use may interact.

PMID: 17989059 [PubMed - indexed for MEDLINE]


Abstract not available


PMID: 18335640 [PubMed - indexed for MEDLINE]


Abstract

The World Cancer Report, a 351 - page global report issued by International Agency for Research on Cancer (IARC) tells us that cancer rates are set to increase at an alarming rate globally (Stewart and Kleiues 2003). Cancer rates could increase by 50 % to 15 million new cases in the year 2020. This will be mainly due to steadily aging populations in both developed and developing countries and also to current trends in smoking prevalence and the growing adoption of unhealthy lifestyles. The report also reveals that cancer has emerged as a major public health problem in developing countries, matching its effect in industrialized nations. Healthy lifestyles and public health action by governments and health practitioners could stem this trend, and prevent as many as one third of cancers worldwide. In a developing country such as India there has been a steady increase in the Crude Incidence Rate (CIR) of all cancers affecting both men and women over the last 15 years. The increase reported by the cancer registries is nearly 12 per cent from 1985 to 2001, representing a 57 per cent rise in India's cancer burden. The total number of new cases, which stood at 5.3 lakhs Care lakk is 100,000 in 1985 has risen to over 8.3 lakhs today. The pattern of cancers has changed over the years, with a disturbing increase in cases that are linked to the use of tobacco. In 2003, there were 3.85 lakhs of cases coming under this category in comparison with 1.94 lakhs cases two decades ago. Lung cancer is now the second most common cancer among men. Earlier, it was in fifth place. Among women in urban areas, cancer of the uterine cervix had the highest incidence 15 years ago, but it has now been overtaken by breast cancer. In rural areas, cervical cancer remains the most common form of the disease (The Hindu 2004).

PMID:15244530 [PubMed - indexed for MEDLINE]

2.1.1. Head and Neck cancers


Abstract

BACKGROUND: Although tobacco deaths rarely make headlines, tobacco kills one person every six seconds. Tobacco kills a third to half of all people who use it, on average 15 years prematurely.

AIM OF THE STUDY: To study the risk of oral cancer associated with gutka consumption and other tobacco products.
OBJECTIVE: (1) To find the association between gutka consumption and oral cancer. (2) To study the association between oral cancer and other tobacco products.

METHODOLOGY: A case-control study of 134 cases and 268 controls, over a period of 5 months, from March 2013 to July 2013, was carried out at the Kasturba medical hospital in Manipal, India. The participants were personally interviewed by the investigator using a structured questionnaire on consumption of tobacco, poly-ingredient dip products, alcohol, dietary practices, oral hygiene practices, and demographic status.

RESULTS: Univariate logistic regression followed by multivariate logistic regression was done for identifying the risk factors and adjusted for the confounding variables. Analysis showed that gutka (<0.001, OR = 5.195% CI = 2.0-10.3), chewing tobacco (P < 0.001, OR = 6.0 95% CI = 2.3-15.7), supari (P < 0.001, OR = 11.4 95% CI = 3.4,38.2), betel quid (P < 0.001, OR = 6.4 95% CI = 2.6-15.5), bidi (P < 0.05, OR = 2.3 95% CI = 1.1-4.8) and alcohol (P < 0.001, OR = 3.7 95% CI = 1.8-7.5) had strong association with oral cancer upon adjustment.

CONCLUSION: The study provided strong evidence that gutka, supari, chewing tobacco, betel quid, bidi and alcohol are independent risk factors for oral cancer.


Abstract

CONTEXT: In 1999, an increase in mouth cancer incidence among young men (<50 years) in urban Ahmedabad was reported to be occurring along with decreasing mouth cancer incidence in older age groups and increasing oral submucous fibrosis incidence associated with areca nut consumption among young men in Gujarat. The aim was to investigate whether the increase in the incidence mouth cancer that had started among young men in the 1990s was continuing.

SETTINGS AND DESIGN: Ahmedabad urban population, comparison of reported mouth cancer cases in the population across four time period.

METHODS: Age-specific incidence rates of mouth cancer (International Classification of Diseases [ICD]-9:143-5; ICD-10:C03-06) in five year age groups among men aged ≥15 years for the city of Ahmedabad for years 1985, 1995, 2007 and 2010 were extracted from published reports. For comparison, lung cancer (ICD-9:169; ICD-10:C33-C34) rates were also abstracted.

STATISTICAL ANALYSIS USED: A cohort approach was used for further analysis of mouth cancer incidence. Age adjusted incidence rates of mouth and lung cancer for men aged ≥15 years were calculated and compared.

RESULTS: The age specific incidence rates of mouth cancer among men increased over the 25-year period while lung cancer rates showed a net decrease. Using a cohort approach for mouth cancer, a rapid increase in younger age cohorts was found.

CONCLUSIONS:

Mouth cancer incidence increased markedly among men in urban Ahmedabad between 1985 and 2010, apparently due to increasing consumption of areca nut products, mawa and gutka. Gutka has now been banned all over India, but a more vigorous implementation is necessary.

PMID: 25526252 [PubMed - in process

Abstract

AIM: This systematic review and meta-analysis aimed to critically appraised data from comparable studies leading to quantitative assessment of any independent association between use of oral smokeless tobacco in any form, of betel quid without tobacco and of areca nut with incidence of oral cancer in South Asia and the Pacific.

METHODS: Studies (case control and/or cohort) were identified by searching Pub Med, CINAHL and Cochrane databases through June 2013 using the keywords oral cancer; chewing tobacco; smokeless tobacco; betel quid; betel quid without tobacco; areca nut; Asia, the Pacific and the reference lists of retrieved articles. A random effects model was used to compute adjusted summary ORRE for the main effect of these habits along with their corresponding 95% confidence intervals. To quantify the impact of between-study heterogeneity on adjusted main-effect summary ORRE, Higgins’ H and I2 statistics along with their 95% uncertainty intervals were used. Funnel plots and Egger's test were used to evaluate publication bias.

RESULTS: Meta-analysis of fifteen case–control studies (4,553 cases; 8,632 controls) and four cohort studies (15,342) which met our inclusion criteria showed that chewing tobacco is significantly and independently associated with an increased risk of squamous-cell carcinoma of the oral cavity (adjusted main-effect summary for case- control studies ORRE = 7.46; 95% CI = 5.86–9.50, P<0.001), (adjusted main-effect summary for cohort studies RR = 5.48; 95% CI = 2.56–11.71, P<0.001). Furthermore, meta-analysis of fifteen case control studies (4,648 cases; 7,847 controls) has shown betel quid without tobacco to have an independent positive association with oral cancer, with OR = 2.82 (95% CI = 2.35–3.40, P<0.001). This is presumably due to the carcinogenicity of areca nut. There was no significant publication bias.

CONCLUSION: There is convincing evidence that smokeless (aka chewing) tobacco, often used as a component of betel quid, and betel quid without tobacco, are both strong and independent risk factors for oral cancer in these populations. However, studies with better separation of the types of tobacco and the ways in which it is used, and studies with sufficient power to quantify dose-response relationships are still needed.

PMID: 25411778 [PubMed - in process] PMCID: PMC4239077


Abstract

Oral cancer is a silent crisis in India. Thirty per cent of all cancers are oral cancer, and approximately 17% of all cancers in men and 10.5% of all cancers in women are oral cancer. Approximately 70,000 new cases are reported annually and 46,000 oral cancer-related deaths occur each year in India; furthermore, the number of cases is rapidly increasing. With this crescendo there may be an estimated 100,000 new cases by 2020, which is insurmountable, especially in emerging economies like India. This astronomical increase is a direct result of tobacco usage. The Global Adult Tobacco Survey performed in 2010 (GATS-2010) reported that approximately 274.5 million people in India use tobacco in various forms. Increasing use of smokeless tobacco, especially by women and children, is of major concern. The World Health Organisation has identified tobacco control and oral cancer control measures as a health priority. However, prevention of tobacco use in India is a great challenge owing to low overall literacy rates and to greater prevalence among people in lower socio-economic strata. Addressing this problem requires a multidisciplinary approach. This paper presents a situational analysis of oral cancer in India and the role of tobacco in making it the epicentre of the disease, and focuses on the role of dental care-givers in influencing and promoting tobacco-control programmes and early detection of oral cancer.

PMID: 25146242 [PubMed - in process]

Abstract

BACKGROUND: An outfall of urbanization in developing countries has been the mushrooming of slums where dwellers live in pitiable environmental conditions representing the lowest rung of social strata. This group is more vulnerable to practicing deleterious social habits, including tobacco and alcohol abuse.

AIM: The present study was undertaken to understand the strength of association between risk factors suspected of causing oral precancer among slum dwellers in Delhi.

SUBJECTS AND METHODS: A house-to-house survey was conducted in an urban slum cluster situated in the heart of Delhi city by a single trained investigator who recorded oral mucosal lesions according to WHO criteria. Demographic details and history of suspected risk factors was recorded by personal interview of each subject. The obtained data was coded, cleaned, and analyzed manually. Chi-square test was applied and Odds' ratios were calculated to analyze the association of risk factors with oral precancer. A statistically significant difference was set at 95% confidence interval.

RESULTS: A total of 479 subjects of both sexes were examined and 31 cases clinically diagnosed as having oral precancer, of which majority were leukoplakia. All cases except one reported practicing habits that are known risk factors for oral precancer, i.e., smoking/smokeless tobacco, chewing betel leaf/nut, and combination of these habits with alcohol. Association of oral precancer with smokeless tobacco was higher than that with smoking or chewing betel leaf/nut alone.

CONCLUSION: Practicing combination of habits with alcohol was found to be the most strongly associated risk factor for oral precancer.

PMID: 25364592 [PubMed] PMCID: PMC4212380

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Abstract

Oral submucous fibrosis (OSMF) a condition first described in the 1950s in the modern literature still remains elusive of a cure. For many years this condition had been confined to countries like India, Pakistan, Bangladesh, etc., but now this condition is being reported from Western countries as well. Inspite of intensive research over the years into the etiologic factors of OSMF, a single etiologic factor cannot be pointed out with certainty rather several causative factors have been proposed. Patients suffering with OSMF initially present with a blanched or marble-like pale mucosa, vesiculations, and also intolerance to hot and spicy food. Gradually, the patient may develop fibrous bands in the buccal and labial mucosa which causes a restriction in opening the mouth. The evidence for the various treatment modalities for OSMF is weak hence better documentation of the studies performed with standardized criteria is required. The current review aims to refresh our knowledge regarding OSMF from an Indian perspective and make a few suggestions to fill the lacunae in this field.

PMID:25494109[PubMed - as supplied by publisher]

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Abstract

In India, about 60% of tobacco users use smokeless tobacco (ST) alone. Head and neck squamous cell carcinoma is one of the most common cancers in India. International Agency for Research on Cancer (IARC) monograph (Vol 89) found a significant association between ST use and oral cancer. However, only a few articles from India were included in this monograph. To overcome this lacuna, we have reviewed the articles published from India investigating the association between ST use and malignant and premalignant diseases of head and neck region. Data collection has been performed by computer-aided search of the MedLine and PubMed databases using different combinations of the key words. For malignant lesions, only cohort and case control
Oral submucous fibrosis (OSMF) a condition first described in the 1950s in the modern literature still remains elusive of a cure. For many years this condition had been confined to countries like India, Pakistan, Bangladesh, and few other countries. Despite being occurring at a visible site and can be detected easily, many patients present in advanced stages with large tumors. Timely intervention is important in improving survival and quality of life in these patients. The aim of the present study was to find out the causes of delay in seeking specialist care in advanced oral cancer patients.

MATERIALS AND METHODS: A prospective questionnaire based study was done on 201 consecutive advanced oral squamous cancer patients who underwent surgery at our hospital. All patients had either cancer of gingivobuccal complex (GBC) or tongue and had tumors of size more than 4 cm (T3/T4) and were treatment naive at presentation.

RESULTS: Even though most patients observed abnormal lesions in their mouth, majority delayed the decision to visit a physician early. A significant percentage of patients (50%) also reported a delayed diagnosis by the primary care physician before being referred to a tertiary care center for definitive treatment. The average total duration from symptoms to treatment was 7 months.

CONCLUSION:
The main reasons of this delay in receiving treatment were due to patients themselves (primary delay) or due to time taken by the primary physician to diagnose the condition (secondary delay). Oral self-examination can be helpful in detecting oral cancers early.


Abstract

INTRODUCTION: Oral potentially malignant disorder” (OPMD) refers to a number of clinical presentations that carry an elevated risk of oral cancer. There has been no single etiological agent identified for potentially malignant disorders.

MATERIALS AND METHODS: The study sample comprised of 500 diagnosed cases from the archives of the Department of the institution during a 11 year period from 2002 to 2013. The data collected was used to investigate the prevalence of oral potentially malignant disorders (OPMD), and to specify the various habits most commonly associated with the occurrence of the particular OPMD with emphasis on the specific type of tobacco usage habit among the local population. Univariate analysis were used to analysis the results.

RESULTS: Leukoplakia was the most common OPMD (60.8%). Tobacco is known to be a common contributory factor in the occurrence of OPMD. Leukoplakia was most commonly found to be associated with bidi smoking (66.3% cases) followed by tobacco chewing. OSMF was the second most common OPMD (21.4%) mainly associated with tobacco chewing in the form of gutka.

CONCLUSION: Tobacco is known to be one of most common contributory factor in the occurrence of oral potentially malignant disorder. In this study, we can conclude that bidi smoking in leukoplakia and erythroplakia and gutka chewing in oral submucous fibrosis were the most common extrinsic factors that were associated with the occurrence of each of these OPMDs. The oral lichen planus cases were found to be more commonly associated with hookah smoking and cigarette smoking other than the immunological reasons.


Abstract

BACKGROUND: The scientific evidence relating to the burden of oral diseases attributable to tobacco use has been reviewed and the need for a well-structured dental teaching program concentrating on oral cancer education and tobacco cessation interventions has been emphasized. The aim of our study was to evaluate the awareness of oral cancer and perception of tobacco use cessation counseling among dental students at all study levels in India, Saudi Arabia, the United Arab Emirates, and Yemen.

MATERIALS AND METHODS: A structured, pre-tested, self-administered 15-item questionnaire was used to conduct a cross-sectional survey. Data analyses including percentages, frequency distributions and tests of chi-square were generated.

RESULTS: A total of 621 (97.6%) Indian, 493 (96.5%) Saudi, 194 (96.5%) Yemeni and 187 (98.4%) United Arab Emirates respondents recognized the association between oral cancer and cigarette smoking. Although more than 96% of the students surveyed recognized the association between oral cancer and cigarette smoking and about 55% reported cigarette smoking as one of the etiological factors of oral cancer, more than 66% of students who reported cigarette smoking as an etiological factor of oral cancer disagreed/strongly disagreed with all the statements concerning tobacco use cessation.

CONCLUSIONS: A higher level of oral cancer awareness did not have a positive impact on the perception of tobacco use cessation counseling among the sample surveyed.

PMID: 23886155[PubMed - indexed for MEDLINE]

Abstract

OBJECTIVES: To determine any differences in oral cancer risk factor awareness and behaviour among first and second generation Gujarati Muslims and to investigate the impact of a community-based health education programme on oral cancer risk factor awareness.

DESIGN: Respondents completed a confidential, bilingual questionnaire in English and Gujarati regarding alcohol, tobacco, paan, supari, paan masala and gutka use before and after a community-based health education programme on oral cancer risk factors.

SETTING: Community Health Fair. Indian Muslim Welfare Association, Batley, West Yorkshire.

SUBJECTS: Ninety-six male and female Gujarati Muslims aged 16 to 81 years.

MAIN OUTCOME MEASURES: Quantitative results on oral cancer risk factor awareness before and after a health education programme. Quantitative figures obtained from the questionnaire with regards to alcohol, tobacco, paan, supari, paan masala and gutka usage.

RESULTS: There were very low levels of alcohol consumption among Gujarati Muslims. First generation Gujarati males consumed significantly more tobacco than second generation Gujarati males, difference in proportion 0.30 (0.03 to 0.56, p = 0.03). There was complete absence of paan use among Gujarati females. First generation Gujarati males consumed significantly higher amounts of supari compared with their male counterparts in the second generation (p = 0.003). There were very low rates of paan masala use. Only first generation Gujarati males consumed gutka. Significantly more first generation males and females correctly identified all oral cancer risk factors after the health education intervention compared with baseline (difference 0.40, 95% CI 0.23 to 0.57, p = <0.001). Significantly more second generation males and females correctly identified all oral cancer risk factors after the health education intervention compared with baseline (difference 0.45, 95% CI 0.28 to 0.61, p = <0.001).

CONCLUSION: Our study demonstrated significant differences in oral cancer risk factor awareness and practices among first and second generation Gujarati Muslims and that a local community-based health education programme was effective in raising awareness.

PMID: 23969680 [PubMed - in process]


Abstract

Oral sub mucous fibrosis is an insidious chronic disease affecting any part of the oral cavity. Worldwide estimates of oral sub mucous fibrosis indicate that 2.5 million people are affected, with most cases concentrated in the Indian subcontinent, especially eastern and southern India. Oral sub mucous fibrosis has a propensity for malignant transformation. The association of betel quid chewing, oral sub mucous fibrosis, and oral squamous cell carcinoma is quite profound, especially in Taiwan and the Indian subcontinent where up to 80% of oral squamous cell carcinoma is associated with the habit. Epidemiological studies have shown that the rate of malignant transformation ranges from 3 to 19%.

PMID: 23771354 [PubMed - indexed for MEDLINE]


Abstract

OBJECTIVES: We studied oral cancer incidence and mortality and the impact of compliance to repeat screening rounds during a 15-year follow-up in a cluster-randomized controlled trial in Trivandrum district, Kerala, India.
METHODS: Healthy individuals aged 35 and above in seven clusters randomized to the intervention arm received four rounds of oral visual inspection by trained health workers at 3-year intervals, and those in six clusters randomized to the control arm received routine care during 1996-2005 and one round of visual screening during 2006-2009. Screen-positive persons were referred for diagnosis and treatment. Oral cancer incidence and mortality were compared between the study arms by intention to treat analysis.

RESULTS: Of the 96,517 eligible subjects in the intervention arm, 25,144 (26.1%) had one, 22,382 (23.2%) had two, 22,008 (22.8%) had three and 19,288 (20.0%) had four rounds of screening. Of the 95,356 eligible subjects in the control group 43,992 (46.1%) received one round of screening. Although the 12% reduction in oral cancer mortality in all individuals did not reach statistical significance, there was a 24% reduction in oral cancer mortality (95% CI 3-40%) in users of tobacco and/or alcohol in the intervention arm after 4-rounds of screening; there was 38% reduction in oral cancer incidence (95% CI 8-59%) and 81% reduction in oral cancer mortality (95% CI 69-89%) in tobacco and/or alcohol users adhering to four screening rounds.

CONCLUSION: Sustained reduction in oral cancer mortality during the 15-year follow-up, with larger reductions in those adhering to repeated screening rounds support the introduction of population-based screening programs targeting users of smoking or chewing tobacco or alcohol or both in high-incidence countries.

PMID: 23265945 [PubMed - indexed for MEDLINE]


Abstract

OBJECTIVES: India has the highest number of cases of oral cancer in the world and this is increasing. This burden is not fully appreciated even within India, despite the high incidence and poor survival associated with this disease. Because the aetiology of oral cancer is predominantly tobacco-related, the immense public health challenge can be ameliorated through habit intervention.

METHODS: We reviewed current rates of incidence, mortality and survival, and investigated the determinants of disease and current prevention strategies.

RESULTS: In addition to tobacco smoking and the myriad other forms of tobacco use prevalent in India, risk factors include areca nut consumption, alcohol consumption, human papillomavirus, increasing age, male gender and socioeconomic factors. Although India has world-leading cancer treatment centres, access to these is limited. Further, the focus of health care services remains clinical and is either curative or palliative.

CONCLUSIONS:

Although the efforts of agencies such as the Ministry of Health and Family Welfare and the Indian Dental Association are laudable, enhanced strategies should be based on common risk factors, focusing on primary prevention, health education, early detection and the earliest possible therapeutic intervention. A multi-agency approach is required.

PMID: 23410017 [PubMed - indexed for MEDLINE]


Abstract

INTRODUCTION: In developing countries, a high proportion of patients with oral cancer are from lower socioeconomic classes. This high proportion is clearly associated with difficulties in accessing the health care system. Hence, the aim of this study is to assess the socio-demographic profile of oral cancer patients at Tamil Nadu, India.

OBJECTIVE: To determine the socio-demographic profile of study subjects.
MATERIALS AND METHODS: This study was a cross sectional study done at a cancer hospital in Chennai. The study population were subjects with oral cancer who reported for treatment. A pretested interviewer administered questionnaire was used to assess the socioeconomic status of oral cancer patients. Pareek’s scale of classification was used for rural population and Kuppuswamy’s classification was used in urban population to assess the socioeconomic status.

RESULTS: A total of 266 oral cancer patients aged 21-60 years and above comprised the study population. Most of the study subjects belonged to the lower socio economic classes. About 48.5% of rural subjects had agriculture as a source of occupation and 28.6% of urban subjects were unskilled labourers. In both rural and urban subjects, majority, 94.9% and 71.9% had family income below Rs 5000. The percentage of illiterates was high in both rural and urban class (i.e.) 55.8% and 21.9% respectively. The difference in the prevalence of oral cancer among different levels of literacy and occupation was found to be significant statistically.

CONCLUSION: Identifying occupation, income and education specific disparities in tobacco use can provide a useful “signpost” indicating inequalities that need to be addressed by policy makers and broader community through allocation of resources.

PMID: 23713038 [PubMed - indexed for MEDLINE]


Abstract

CONTEXT: With an increase in the abuse of various oral habitual products in India over the past few decades; the incidence of oral potentially malignant conditions as leukoplakia, oral submucous fibrosis and squamous cell carcinoma (SCC) rates have also increased. No recent study has been conducted reporting the scenario of oral cancer and potentially malignant conditions in Eastern India (specifically Kolkata).

AIMS: The present study was conducted at Dr. R. Ahmed Dental College, Kolkata during 2010-2011 to find a possible correlation between the effects of the different oral habits, age, sex and the different types of oral mucosal lesions among patients reported to the hospital. This study also enabled us to see the predilection of the various histopathological stages of the lesions for different sites of the oral cavity.

SUBJECTS AND METHODS: The study group consisted of 698 patients having either oral potentially malignant or malignant lesion. The control group consisted of 948 patients who had reported to the hospital for different oral/dental problems and had the habit of tobacco, areca nut and/or alcohol usage for at least 1 year.

STATISTICAL ANALYSIS: The unadjusted odds ratio, the 95% confidence interval, and the P value were calculated to correlate patients with/without different kinds of habit and having/not having various kinds of oral lesions.

RESULTS: Our study shows that for males having the habit of taking smokeless tobacco or mixed habit poses the highest risk for developing SCC. For females, significant risk of developing SCC was found in patients habituated to processed areca nut chewing.

CONCLUSION: This study presents probably for the first time in recent years the occurrence of oral potentially malignant and malignant conditions amongst patients having deleterious habits in a hospital based population of Kolkata.

PMID: 23798829 [PubMed] PMCID: PMC3687188

Abstract

Oral cancer is one of the most fatal health problems faced by the mankind today. In India, because of cultural, ethnic, geographic factors and the popularity of addictive habits, the frequency of oral cancer is high. It ranks number one in terms of incidence among men and third among women. Several factors like tobacco and tobacco related products, alcohol, genetic predisposition and hormonal factors are suspected as possible causative factors. Hence the study was designed to determine the prevalence of Oral Cancer in patients who attended the outpatient department, at Bharati Vidyapeeth Deemed University Dental College Sangli India during a period of 24 months in 2009-2010. Further various modes of tobacco and alcohol consuming habit were assessed along with the site of occurrence of oral cancer. About 35,122 subjects belonging to a semi-urban district of Sangli in Western Maharashtra (India) were screened. Tobacco and alcohol consumption was the common habit among the study population. Out of these about 112 cases showed Oral Cancer. The prevalence of Oral Cancer was 1.12%. Statistical analysis was done using the SPSS software 11. The findings in the present study reveal a high prevalence of Oral Cancer and a rampant misuse of variety of addictive substances in the community. Close follow up and systematic evaluation is required in this population. There is an urgent need for awareness programs involving the community health workers, dentists and allied medical professionals.

PMID:21786206[PubMed - indexed for MEDLINE]


Abstract

The purpose of this study was to determine the prevalence of oral soft tissue lesions in patients who attended the outpatient department, at Bharati Vidyapeeth Deemed University Dental College during a period of 18 months in 2009-2010. About 24,422 subjects belonging to a semi-urban district of Sangli in Western Maharashtra (India) were screened. Out of these about 623 cases showed soft tissue lesions. Statistical analysis was done using the SPSS software. 2.5% of the population studied had one or more oral lesions associated with prosthetic use, trauma and tobacco consumption etc. Six hundred and twenty-three patients were found to have significant mucosal lesions. 75 had leukoplakia, 152 had oral submucous fibrosis, 14 had both both leukoplakia and oral submucous fibrosis, 82 had oral squamous cell carcinoma, 35 had oral lichen planus, 195 had apthous ulcers, 23 had denture stomatitis, 28 had fibroma and 19 cases had pyogenic granuloma. The findings in the present study reveal a high prevalence of oral soft tissue lesions and a rampant misuse of variety of addictive substances in the community. Close follow up and systematic evaluation is required in this population. There is an urgent need for awareness programs involving the community health workers, dentists and allied medical professionals.

PMID:21318256[PubMed - indexed for MEDLINE]


Abstract

The aim of this study was to recognize factors associated with cancer of oral cavity considering socio-demographic characteristics. The cases were 350 with squamous-cell carcinoma of oral cavity diagnosed between 2005 and 2006 in Morbai, Narandia, Budharani Cancer Institute, Pune, India. Similar number of controls match for age and sex selected from the background population. Cases and controls were interviewed for tobacco related habits and general characteristics; age, gender, education and possible socio-demographic factors. Chi-square test in uni-variate analysis and estimate for risk showed that education, occupation and monthly household income were significantly different between cases and controls (P, 0.001). Irrespective to gender, relative risk, here odds ratio, (OR) of low level of education (OR = 5.3, CI 3.7–7.6), working in field as a farmer (OR = 2.5, CI 1.7–3.7), and monthly household income less than 5000 Indian Rupees currency (OR = 1.7, CI 1.2–2.3) were significant risk factors for oral cancer. While, there was no significant relationship between religious and or marital status either in males or females.

Abstract

BACKGROUND: Because of delays in diagnosis, oral cancer usually presents for therapy at a late stage. Patients are unaware of having lesions as they are mostly asymptomatic and physicians generally do not examine the mouth sufficiently. People in rural areas or are underserved may not frequently visit the dentist who can easily pick up these lesions early. Screening programs are useful in that regard. Such programs in general are conducted by either inviting people to come to a screening center or by health care workers visiting the individual households. However, those who work during the day may not visit screening centers or be at home during the day of the screening by a visiting health care worker. Workplace screening overcomes these challenges.

METHODS: To assess the feasibility of a screening program to detect potentially pre-malignant oral disorders in a workplace in India, clinically visible mucosal lesions were compared with the clinical photographs of the same lesions assessed by an expert. Role of smoking, alcohol, and chewing betel quid and tobacco in the etiology of those lesions were assessed.

RESULTS: Sixty-nine percent of the eligible subjects participated in the screening (n=1613). Prevalence of leukoplakia was 5%. Bidi (OR=35.8), and cigarette smoking (OR=22.8), alcohol (OR=17.6), and tobacco and areca nut chewing (OR=7.5), were significantly associated with leukoplakia and erythroplakia (all P < 0.05).

CONCLUSIONS: Conduction of a screening program by valid visual inspection to detect potentially malignant oral disorders within a workplace is not only feasible but also effective.

PMID: 20738753 [PubMed - indexed for MEDLINE]


Abstract

There is a high prevalence of tobacco consumption among prisoners. This study aimed to establish tobacco use, to explore and assess oral cancer awareness and to identify associations between oral cancer awareness and tobacco use in a sample of male prisoners in a local Indian prison.

METHODOLOGY: A systematically selected random sample of male prisoners participated and a structured interview schedule was used, generated from two different sets of validated standardised questionnaires: the WHO STEPS instrument for NCD (Non Communicable Diseases) Risk Factors to assess tobacco consumption and the modified Humphris Oral Cancer Knowledge Scale to assess oral cancer knowledge.

RESULTS: Participation rate was 100%. Prevalence of tobacco consumption, mainly smoked, amongst prisoners was 68.5% (95% CI 63, 73%) The mean oral cancer knowledge score amongst prisoners was 13.28 (95% CI 12.9, 13.6). Statistically significant associations (P < 0.05) were found between oral cancer knowledge and age of participants, years of education and starting age of tobacco use. No association was found between oral cancer knowledge and tobacco consumption.

CONCLUSIONS: Tobacco use was high. Knowledge did not appear to impact on this behaviour, indicating the need for effective smoking interventions in this sample.

PMID: 20476720 [PubMed - indexed for MEDLINE]

Abstract

BACKGROUND: The purpose of this study was to determine the prevalence of oral soft tissue lesions in patients and to assess their clinicopathological attributes. 3030 subjects belonging to a semi-urban district of Vidsaha in Central India were screened. Patients were examined with an overhead examination light and those who were identified with a questionable lesion underwent further investigations. Statistical analysis was done using the SPSS software.

FINDINGS: 8.4 percent of the population studied had one or more oral lesions, associated with prosthetic use, trauma and tobacco consumption. With reference to the habit of tobacco use, 635(21%) were smokers, 1272(42%) tobacco chewers, 341(11%) smokers and chewers, while 1464(48%) neither smoked nor chewed. 256 patients were found to have significant mucosal lesions. Of these, 216 cases agreed to undergo scalpel biopsy confirmation. 88 had leukoplakia, 21 had oral submucous fibrosis, 9 showed smoker's melanosis, 6 patients had lichen planus, 17 had dysplasia, 2 patients had squamous cell carcinoma while there was 1 patient each with lichenoid reaction, angina bullosa hemorrhagica, allergic stomatitis and nutritional stomatitis.

CONCLUSIONS: The findings in this population reveal a high prevalence of oral soft tissue lesions and a rampant misuse of variety of addictive substances in the community. Close follow up and systematic evaluation is required in this population. There is an urgent need for awareness programs involving the community health workers, dentists and allied medical professionals.

PMID:20181008[PubMed] PMCID:PMC2828461


Abstract

Oral cancer is one of the most common cancers in the world, with two-thirds of the cases occurring in developing countries. While cohort and nested case-control study designs offer various methodological strengths, the role of tobacco and alcohol consumption in the etiology of oral cancer has been assessed mainly in case-control studies. The role of tobacco chewing, smoking and alcohol drinking patterns on the risk of cancer of the oral cavity was evaluated using a nested case-control design on data from a randomized control trial conducted between 1996 and 2004 in Trivandrum, India. Data from 282 incident oral cancer cases and 1410 matched controls were analyzed using multivariate conditional logistic regression models. Tobacco chewing was the strongest risk factor associated with oral cancer. The adjusted odds ratios (ORs) for chewers were 3.1 (95% confidence interval (CI)=2.1-4.6) for men and 11.0 (95%CI=5.8-20.7) for women. Effects of chewing pan with or without tobacco on oral cancer risk were elevated for both sexes. Bidi smoking increased the risk of oral cancer in men (OR=1.9, 95%CI=1.3-3.2). Dose-response relations were observed for the frequency and duration of chewing and alcohol drinking, as well as in duration of bidi smoking. Given the relatively poor survival rates of oral cancer patients, cessation of tobacco and moderation of alcohol use remain the key elements in oral cancer prevention and control.

PMID:17933578[PubMed - indexed for MEDLINE]


Abstract

Hypopharyngeal and laryngeal cancers are among the most common cancers in India. In addition to smoking, tobacco chewing may be a major risk factor for some of these cancers in India. Using data from a multicentric case-control study conducted in India that included 513 hypopharyngeal cancer cases, 511 laryngeal cancer cases and 718 controls, we investigated smoking and chewing tobacco products as risk factors for these cancers. Bidi smoking was a stronger risk factor compared to cigarette smoking for cancer of the hypopharynx (OR(bidi) 6.80 vs. OR(cig) 3.82) and supraglottis (OR(bidi) 7.53 vs. OR(cig) 2.14), while the effect of the 2 products was similar for cancer of the glottis (OR(bidi) 5.32 vs. OR(cig) 5.74). Among never-smokers, tobacco chewing was a risk factor for hypopharyngeal cancer, but not for laryngeal cancer. In particular, the risk of hypopharyngeal cancer increased with the use of Khaini (OR 2.02, CI 0.81-5.05), Mawa (OR 3.17, CI 1.06-9.53), Pan (OR 3.34, CI 1.68-6.61), Zarda (OR 3.58, CI 1.20-10.68) and Gutkha (OR 4.59, CI 1.21-17.49). A strong
A total of 9,670 oral cancers (8.2% of all neoplasms) were registered, of which 6577 were in males and 3093 in females (10.7% and 5.4% of the respective totals for the two genders). For evaluation of the trend, we applied a linear regression model based on the logarithm of the observed incidence rates. The annual percentage changes were also computed for the incidence rates to evaluate the time trend.

RESULTS: In males, a statistically significant decreasing trend in the overall age-adjusted incidence rates were observed during the period 1986 to 2000, with an yearly decrease of 1.70%. This decrease was significant for men above the age of 40, but for young adult men below the age of 40, there was no significant decrease, the level being stable. In females, the overall decreasing trend in the age-adjusted incidence rates of oral cancers was not significant, but in the age group 40-59, a significant decline was observed. The probability estimates indicated that one out of every 57 men and one out of every 95 women will contract any oral cancer at some time in their whole life and 97% of the chance is after he or she completes the age of 40.

CONCLUSION: The observed decreasing trend in oral cancers in Indian men may be attributed to a decrease in the use of pan and tobacco. The high prevalence of the usage of smokeless tobacco among young adult men and women may explain the stable trend in oral cancer incidence in this group. These findings help to strengthen the association between tobacco use and oral cancer risk.

PMID:15373710[PubMed - indexed for MEDLINE] 

Abstract

OBJECTIVE: We estimated the time trends in the incidence and the risk of developing an oral cancer in Mumbai, Indian population using the data collected by the Bombay Population Based Cancer Registry during the 15 year period from 1986 to 2000.

METHODS: A total of 9,670 oral cancers (8.2% of all neoplasms) were registered, of which 6577 were in males and 3093 in females (10.7% and 5.4% of the respective totals for the two genders). For evaluation of the trend, we applied a linear regression model based on the logarithm of the observed incidence rates. The annual percentage changes were also computed for the incidence rates to evaluate the time trend.

RESULTS: In males, a statistically significant decreasing trend in the overall age-adjusted incidence rates were observed during the period 1986 to 2000, with an yearly decrease of 1.70%. This decrease was significant for men above the age of 40, but for young adult men below the age of 40, there was no significant decrease, the level being stable. In females, the overall decreasing trend in the age-adjusted incidence rates of oral cancers was not significant, but in the age group 40-59, a significant decline was observed. The probability estimates indicated that one out of every 57 men and one out of every 95 women will contract any oral cancer at some time in their whole life and 97% of the chance is after he or she completes the age of 40.

CONCLUSION: The observed decreasing trend in oral cancers in Indian men may be attributed to a decrease in the use of pan and tobacco. The high prevalence of the usage of smokeless tobacco among young adult men and women may explain the stable trend in oral cancer incidence in this group. These findings help to strengthen the association between tobacco use and oral cancer risk.

PMID:15373710[PubMed - indexed for MEDLINE] 

An annotated bibliography of scientific studies done on tobacco topic in WHO South-East Asia Region countries

India

Abstract

In south-east Asia (including India), Taiwan and Papua New Guinea, smoking, alcohol consumption and chewing of betel quid with or without tobacco or areca nut with or without tobacco are the predominant causes of oral cancer. In most areas, betel quid consists of a mixture of areca nut, slaked lime, catechu and several condiments according to taste, wrapped in a betel leaf. Almost all habitual chewers use tobacco with or without the betel quid. In the last few decades, small, attractive and inexpensive sachets of betel quid substitutes have become widely available. Aggressively advertised and marketed, often claimed to be safer products, they are consumed by the very young and old alike, particularly in India, but also among migrant populations from these areas world wide. The product is basically a flavoured and sweetened dry mixture of areca nut, catechu and slaked lime with tobacco (gutkha) or without tobacco (pan masala). These products have been strongly implicated in the recent increase in the incidence of oral submucous fibrosis, especially in the very young, even after a short period of use. This precancerous lesion, which has a high rate of malignant transformation, is extremely debilitating and has no known cure. The use of tobacco with lime, betel quid with tobacco, betel quid without tobacco and areca nut have been classified as carcinogenic to humans. As gutkha and pan masala are mixtures of several of these ingredients, their carcinogenic affect can be surmised. We review evidence that strongly supports causative mechanisms for genotoxicity and carcinogenicity of these substitute products. Although some recent curbs have been put on the manufacture and sale of these products, urgent action is needed to permanently ban gutkha and pan masala, together with the other established oral cancer-causing tobacco products. Further, education to reduce or eliminate home-made preparations needs to be accelerated.

PMID:15215323[PubMed - indexed for MEDLINE]

2.1.2. Thoracic cancers


Abstract

BACKGROUND: Esophageal cancer has a peculiar geographical distribution and shows marked differences in incidence within a particular geographical region. Presently, as there seems little prospect of early detection of this cancer, an understanding of the etiological factors may suggest opportunities for its primary prevention.

OBJECTIVES: The present study was carried out to find out the socio-demographic determinants of esophageal cancer in a tertiary care teaching hospital of western Maharashtra, India.

MATERIALS AND METHODS: A retrospective hospital record-based study was carried out for the period of five years (2007-2011) in the department of Radiotherapy of Pravara Rural Hospital, Loni, western Maharashtra, India. A total of 5879 patients were diagnosed with cancer, of them, 207 (3.52%) patients had esophageal cancer. Data was collected on the basis of the patients' record in the hospital and analyzed in the form of percentage and proportions whenever appropriate.

RESULTS: Out of total 5879 patients who were diagnosed with cancer during the five studied years, 207 (3.52%) patients had esophageal cancer, of which 121 (58.46%) were males and 86 (41.54%) were females, which show predominance of males over females. Most of the patients (28.50%) belonged to lower class, while only 9.66% were from upper class. Majority of the patients (54.14%) had a history of tobacco chewing, followed by smoking (cigarette, bidi, or both) in 36.94% and alcohol in 21.65%.

CONCLUSION: The present study shows that esophageal cancer constitutes 3.52% of cancer cases. There is a need to screen the high-risk group of people, improve socio-economic status, and efforts must be made to introduce a set of preventive measures that have the potential to significantly reduce the burden of disease and to help bridge the gap between research and public awareness.

PMID:24665448[PubMed] PMCID:PMC3961870

Abstract

BACKGROUND: Lung cancer is one of the commonest and most lethal cancers throughout the world. The epidemiological and pathological profile varies among different ethnicities and geographical regions. At present adenocarcinoma is the commonest histological subtype of non-small cell lung cancer (NSCLC) in most of the Western and Asian countries. However, in India squamous cell carcinoma has been reported as the commonest histological type in most of the series. The aim of the study was to analyze the current clinico-pathological profile and survival of lung cancer at our centre.

MATERIALS AND METHODS: We analyzed 434 pathologically confirmed lung cancer cases registered at our centre over a period of three years. They were evaluated for their clinical and pathological profiles, treatment received and outcome. The available histology slides were reviewed by an independent reviewer.

RESULTS: Median age was 55 years with a male:female ratio of 4.6:1. Some 68% of patients were smokers. There were 85.3% NSCLC and 14.7% SCLC cases. Among NSCLCs, adenocarcinoma was the commonest histological subtype after the pathology review. Among NSCLC, 56.8% cases were of stage IV while among SCLC 71.8% cases had extensive stage disease. Some 29% of patients could not receive any anticancer treatment. The median overall and progression free survivals of the patients who received treatment were 12.8 and 7.8 months for NSCLC and 9.1 and 6.8 months for SCLC.

CONCLUSIONS: This analysis suggests that adenocarcinoma may now be the commonest histological subtype also in India, provided a careful pathological review is done. Most of the patients present at advanced stage and outcome remains poor.

PMID:23534779[PubMed - indexed for MEDLINE]


Abstract

BACKGROUND: Globally, there have been important changes in trends amongst gender, histology and smoking patterns of lung cancer cases.

MATERIALS AND METHODS: This retrospective study was conducted on 466 patients with lung cancer who were registered in Regional Cancer Center, Regional Institute of Medical Sciences, Manipur from January 2008 to December 2012.

RESULTS: Most were more than 60 years of age (67.8%) with a male:female ratio of 1.09:1. Some 78.8% of patients were chronic smokers with male smoker to female smoker ratio of 1.4:1. Consumption of alcohol was found in 29.4%, both smoking and alcohol in 27.5%, betel nut chewing in 37.9% and tobacco chewing in 25.3%. A history of tuberculosis was present in 16.3% of patients. The most frequent symptom was coughing (36.6%) and most common radiological presentation was a mass lesion (70%). Most of the patients had primary lung cancer in the right lung (60.3%). The most common histological subtype was squamous cell carcinoma (49.1%), also in the 40-60 year age group (45.9%), more than 60 year age group (51.6%), males (58.1%) and females (41.8%). As many as 91.9% of squamous cell carcinoma patients had a history of smoking. About 32.5% of patients had distant metastasis at presentation with brain (23.8%) and positive malignant cells in pleural effusions (23.1%) as common sites. The majority of patients were in stage III (34.4%), stage IV (32.5%) and stage II (30.2%).

CONCLUSIONS: Our analysis suggests that the gender gap has been narrowed such that about half of the patients diagnosed with lung cancer are women in this part of India. This alarming rise in female incidence is mainly attributed to an increased smoking pattern. Squamous cell carcinoma still remains the commonest histological subtype. Most of the patients were elderly aged and presented at locally or distantly advanced stages.

PMID:24460288[PubMed - indexed for MEDLINE]

Abstract

A 65-year-old male with a history of smoking since 30 years presented with breathlessness, hemoptysis, multiple swellings all over the body, and weakness in September 2010 at our hospital. Clinically, a diagnosis of chronic obstructive pulmonary disease (COPD) with cutaneous lymphoma or soft tissue tumor was made. Chest X-ray (CXR) and computed tomography (CT) scan revealed a neoplastic lesion in the right lung with secondary cavitition. Biopsy of the cutaneous nodules showed metastatic deposits from squamous cell carcinoma. Metastatic skin cancer is a relatively rare complication of internal malignancy. The clinical features of metastatic skin disease vary enormously. They may present as erysipeloid, sclerodermoid, alopecia neoplastica or in an inflammatory or bullous form or as multiple nodules as in our case. A high index of suspicion for metastatic deposits is required in an elderly male patient who is a known case of lung cancer or even one who is a chronic smoker and presents with such cutaneous lesions.

PMID:23984229[PubMed] PMCID:PMC3752471


Abstract

The burden of lung cancer in terms of mortality is the highest among all types of cancers globally. The present study aimed to evaluate lifestyle related habits, clinico-pathological profile and treatment details of lung cancer patients who were registered at Malabar Cancer Centre (MCC), Kerala, during the calendar year 2010. A retrospective evaluation was made from medical records to gather data from 281 registered lung cancer cases in 241 males and 40 females, with a male to female ratio of 6.03: 1. Approximately 89% of the cases were above 50 years of age. Among males about 91% of the cases were smokers and 62% of them had a chronic smoking habit. Adenocarcinomas, squamous cell carcinomas, non-small cell carcinomas and small cell cancers accounted for 10.7, 13.9, 17.0 and 5.7% respectively. Out of 281 cases around 67% were diagnosed with distant metastasis and the remainder had regional lymph node involvement. However, no statistically significant difference was observed for secondary site of tumor according to gender. As majority of the cases reported at MCC were in an advanced stage of the disease, histology of the secondary site from supraclavicular lymph nodes or liver was taken for diagnosis. Initiation of population based screening for early detection of cancer, and primary and secondary prevention strategies for reducing the prevalence of tobacco consumption are high priorities to reduce the lung cancer burden in Kerala.

PMID:23167394[PubMed - indexed for MEDLINE]


Erratum in


Abstract

BACKGROUND: Although cigarette smoking is an established risk factor for oesophageal squamous cell carcinoma (ESCC), there is little information about the association between other smoking and smokeless tobacco products, including hookah and nass, and ESCC risk. We conducted a case-control study in Kashmir Valley, India, where hookah smoking, nass chewing, and ESCC are common, to investigate the association of hookah smoking, nass use, and several other habits with ESCC.

METHODS: We recruited 702 histologically confirmed ESCC cases and 1663 hospital-based controls, individually matched to the cases for age, sex, and district of residence from September 2008 to January 2012. Conditional logistic regression models were used to calculate odds ratios (ORs) and 95% confidence intervals (95% CIs).
RESULTS: Ever-hookah smoking (OR=1.85; 95% CI, 1.41-2.44) and nass chewing (OR=2.88; 95% CI, 2.06-4.04) were associated with ESCC risk. These associations were consistent across different measures of use, including intensity, duration, and cumulative amount of use, and after excluding ever users of the other product and cigarette smokers. Our results also suggest an increased risk of ESCC associated with ever-gutka chewing and -bidi smoking. However, the latter associations were based on small number of participants.

CONCLUSION: This study shows that hookah and nass use are associated with ESCC risk. As prevalence of hookah use seems to be increasing among young people worldwide, these results may have relevance not only for the regions in which hookah use has been a traditional habit, but also for other regions, including western countries.

Comment in

- False positive result in study on hookah smoking and cancer in Kashmir: measuring risk of poor hygiene is not the same as measuring risk of inhaling water filtered tobacco smoke all over the world. [Br J Cancer. 2013]
- Reply: false positive result in study on hookah smoking and cancer in Kashmir: measuring risk of poor hygiene is not the same as measuring risk of inhaling water-filtered tobacco smoke all over the world. [Br J Cancer. 2013]

PMID:23033008[PubMed - indexed for MEDLINE] PMCID:PMC3493783


Abstract

OBJECTIVE: To identify the risk factors of esophageal cancer and study their effect on the survival rates patients of Jammu region, India.

MATERIALS AND METHODS: Detailed information was collected on socio-demographic, dietary and clinico-pathological parameters for 200 case control pairs. Discrete (categorical) data of 2 independent groups (control and cases) were summarized in frequency (%) and compared by using Chi-square ($\chi^2$) test. The mean age of two independent groups was compared by independent Student's t-test. To find out potential risk factor(s), the variable(s) found significant in univariate analysis were further subjected to multivariate logistic regression analysis. The association of potential risk factors with patients survival (3-year overall survival) was done by Kaplan-Meier survival curve analysis using Log-rank test. A 2-tailed ($a = 2$) $P < 0.05$ was considered statistically significant.

RESULTS: Out of the 63 response parameters, seven were found highly significant on multivariate analysis. The mean ($\pm$ SD) age was 56.74 $\pm$ 10.76 years, the proportions of males were higher than females, mostly illiterate and lower income group. Among dietary characteristics, snuff was highest (OR = 3.86, 95% CI = 2.46-6.08) followed by salt tea (OR = 2.53, 95% CI = 1.49-4.29), smoking (OR = 1.97, 95% CI = 1.18-3.30), sundried food (OR = 1.77, 95% CI = 1.10-2.85) and red chilly (OR = 1.76, 95% CI = 1.07-2.89). Probability of survival lowered significantly ($P < 0.05$ or $P < 0.01$ or $P < 0.001$) in those consuming tobacco in the form of snuff (Log-rank $c = 24.62$, $P = 0.000$) and smoking (Log-rank $c = 5.20$, $P = 0.023$) as compared to those who did not take these.

CONCLUSIONS: The analysis finally established snuff (smokeless tobacco) as the most powerful risk factor of esophageal cancer in Jammu region, followed by the salt tea, smoking and the sundried food.

PMID:23107978[PubMed - indexed for MEDLINE]


An annotated bibliography of scientific studies done on tobacco topic in WHO South-East Asia Region countries 187
Abstract

Esophageal cancer is one of the most common cancers worldwide. It is a multifactorial disease, and no single agent has been identified so far as the sole cause of the cancer. Many factors like smoking, the consumption of alcohol, fungal-contaminated, spicy and various nitrosamine-containing food stuffs and hot beverages, nutritional deficiency of some vitamins like β-carotene, vitamin A, C and E and minerals like zinc, selenium and molybdenum, the use of opium, HPV infection and various genetic factors have been found associated with the occurrence of the disease worldwide. Wide geographic differences and substantial changes in the incidence of esophageal cancer occurring over time have been suggested. Among the risk factors in India, betel quid chewing carries a relatively high risk. High incidences in Kashmir have been associated with the consumption of hot salted tea, sun-dried, smoked foods, tobacco in the form of hukka and various genetic factors. The exact cause of esophageal squamous cell carcinoma is unknown. Much work has been carried out on the role of various environmental factors, gene mutations, and polymorphisms worldwide, including Kashmir. Although the Kashmir valley is present on the border of the 'high risk esophageal cancer belt' and esophageal squamous cell carcinoma represents the most commonly occurring malignancy in Kashmir, the amount of information available on various associated factors is still very little as there is a paucity of various epidemiological and molecular studies being carried out in this field.

PMID:22677984[PubMed - indexed for MEDLINE]


Abstract

BACKGROUND AND AIMS: An epidemiological shift in the form of increase in the incidence of cancer and decrease in the incidence of smoking is universally realized today. This study was conducted to observe an association of smoking, use of alcohol and tobacco and cancers of the oral cavity, larynx and esophagus

MATERIAL AND METHODS: it was a case control study conducted at Deptt. of Radiotherapy at GMCH, Chandigarh. The registers from radiology department were utilized and studied for the presence of history of alcohol consumption, smoking and tobacco intake. Statistical analysis was done by calculating Odds ratio along with 95% confidence interval.

RESULTS: Out of 363 cases with the diagnosis of Laryngeal, Esophageal and Oral Cancer along with 568 controls studied, 42 (11.6%) were in the age group of 30-44 years, 153 (42.1%) in the age group of 45-59 years and rest 171 (47.1%) in the age group of 60+ years. Among cases, the percentage of tobacco use, smoking and alcohol consumption was 10.5, 60.6 and 33.6 respectively as against the similar percentages among controls 1.4, 9.0 and 6.3. The odds ratio for tobacco use in relation to patients aged 60+ years was 2.39, in the age group of 45-59 years was 11.19 and increased to 55.35 in the age group 30-44 years. Similarly the overall odds ratio for alcohol consumption was 7.48 and it was 4.98 in the age group 60+ years, 6.30 in the age group 45-59 years and increasing to 17.00 in the age group of 30-44 years.

CONCLUSION: Finding suggests that risk of cancer of the upper respiratory and alimentary tracts is higher with tobacco and alcohol use. Further studies are required.

PMID:21875270[PubMed - indexed for MEDLINE]


Abstract

OBJECTIVE: In the recent past, adenocarcinoma has become the commonest histological type of lung cancer (LC) in the developed countries. The present study was conducted to assess the change in epidemiology of LC, if any, in North India.
Methods: Prospectively collected data on 250 newly diagnosed LC patients presenting to a tertiary care institute was analyzed. Results were compared with the previously published data from this center.

Results: No significant differences were observed in the demographical, histological or smoking profiles of LC patients compared to those seen three decades earlier. The mean [standard deviation] age was 57.9 [+/-11.3] years (previously 54.3 years). Male to female ratio was 4.43:1 (previously 4.48:1; p=0.952) while the smoker to non-smoker ratio was 2.67:1 (previously 2.68:1; p=0.980). The commonest histological types were squamous cell (34.8%), adenocarcinoma (26.0%) and small cell (18.4%) while previously these were 34.3%, 25.9% and 20.3%, respectively; p=0.916. However, in the present study, significant differences were observed between smokers and non-smokers in relation to distribution of gender, histology and disease stage.

Conclusions: There has been no significant change in the epidemiology of LC in North India over the past three decades. An absence of change in the smoking pattern of the population could be a possible reason.

PMID: 20079703 [PubMed - indexed for MEDLINE]


Abstract

Esophageal cancer is a relatively rare form of cancer, but some world areas have a markedly higher incidence than others: China, Iceland, India, Japan and United Kingdom, appear to have a higher incidence, as well as the region around the Caspian Sea. In India the incidence rates vary across the country. Despite higher incidence rate, there are only few studies from the Indian subcontinent. This study conducted at Tata Memorial hospital, Mumbai, India, included 442 cases of esophageal cancer and 1628 hospital controls. Data was collected on chewing, smoking, alcohol habits and dietary habits. The results indicated a moderate 1.1 times excess risk for chokers of pan (betel-leaf) with tobacco, 1.8-fold excess risk for bidi smokers and 2-fold for cigarette smokers, and 1.8-fold excess risk for alcohol drinkers. There was a clear dose-response relationship in those with the habits. Among the beverages, tea drinking, common in India, showed a 4-fold excess risk for esophageal cancer. However fresh-fish showed a 20% reduction in risk for esophageal cancer. Besides several other risk factors, these may be studied in the Indian set-up which has a heterogeneous population with a varied life-style and dietary habits. This could give indicators for prevention.

PMID: 19846360 [PubMed - indexed for MEDLINE]


Abstract

Background: Lung cancer is one of the most aggressive and prevalent type of malignancy causing high morbidity and mortality. Tobacco smoking continues to be the leading cause of lung cancer worldwide. An increasing incidence of lung cancer has been observed in India.

Objective: The aim of this study was to evaluate the clinico, a pathological profile of the lung cancer in hilly state of Uttarakhand.

Materials and Methods: We performed a retrospective analysis of histopathologically proven cases of bronchogenic carcinoma admitted in our hospital from January 1998 to August 2005.

Results: Our study included 203 patients with confirmed cases of lung cancer. Male to female ratio was 8.2:1. The common age group being 40-60 years, 9.86% of the patients were less than 40 years old age. Smoking was found to be the main risk factor in 81.77% patients. The most frequent symptom was cough (72.90%) followed by fever (58.12%). The most common radiological presentation was mess lesion (46.31%). The most common histopathological type was squamous cell carcinoma (SCC) (44.83%) followed by adenocarcinoma (19.78%) and
small cell lung carcinoma (SCLC) (16.75%). The majority patients (73.29%) were diagnosed in the later stages of the disease (III B and IV).

CONCLUSION: It was found out that SCC was the most frequent histopathological form. SCLC predominates below 40 year and SCC over 60 years of age. Smoking still remains the major risk factors in pathogenesis of lung cancer.

PMID:20442840[PubMed] PMCID:PMC2862510


Abstract

This article discusses the role of bidi smoking as a risk factor for lung cancer. A review of the documented evidence is presented. The literature from Pubmed has been searched using the key words 'bidi smoking', 'bidi smoking' and 'lung cancer'. The bibliographies of all papers found were further searched for additional relevant articles. After this thorough search, eight studies were found. The evidence suggests that bidi smoking poses a higher risk for lung cancer than cigarette smoking and risk further increases with both the length of time and amount of bidi smoking. The focus of tobacco control programs should be expanded to all types of tobacco use, including bidis, to reduce the increasing problem of lung cancer.

PMID: 20103944 [PubMed - indexed for MEDLINE]


Abstract

Lung cancer (LC) is the leading cause of cancer-related mortality in developing as well as developed countries. Life style choices, particularly tobacco smoking, have been implicated as the main cause in the development of the LC. Despite the fact that majority cases of the LC occur among smokers, only 1-15% of smokers develop LC. In the present study, we have explored the role of genetic polymorphism, smoking habit and their association to LC in a cohort of north Indian population. The polymorphic genes explored were CYP1A1, GSTM1, GSTP1 and GSTT1 using techniques of Polymerase chain reaction (PCR), Restriction Fragment Length Polymorphism (RFLP), Real Time PCR (RT PCR), and gene sequencing. Genetic polymorphism was analysed in 253 normal participants (control) and 93 LC patients originating from Lucknow, India. Data were compared using odds ratio and Fisher Exact Test. We found that smoking increases the susceptibility to LC threefold (OR = 2.9; 95% CI: 0.9-2.8). The most significant risk for LC (OR = 3.2; 95% CI: 0.7-3.8) was found in the association of the homozygous variant of CYP1A1 gene at A2455G base change at Exon 7 (Val/Val) genotype. There was a marginally significant association between LC and GSTT1 null genotype (OR = 1.3; 95% CI: 1.0-1.7) while no significant risk association was found between GSTP1 polymorphism and LC. The present study demonstrates that the presence of null genotype of GSTM1/GSTT1 taken together with CYP1A1 (Val/Val) genotype increases the susceptibility to LC eightfold in comparison to CYP1A1 (Ile/Ile) and GSTM1/ GSTT1 genotype.

PMID:19009239[PubMed - indexed for MEDLINE]


Abstract

OBJECTIVE: To estimate the probability of developing lung cancer in the entire life span of the people of Greater Mumbai and variation according to age and sex. Information on cancer incidence trends in a community forms the scientific basis for planning and organising prevention, diagnosis and treatment. During the last 24 year period, a total of 11,458 lung cancer cases were registered (9,052 male and 2,406 female) by the Bombay Cancer Registry. Lung cancer accounts for 9.4% of all male cancers and 2.7% of those in females (6.2% of all
cancers) in Greater Mumbai. The probability of developing cancer in the entire life span of the people of Greater Mumbai was estimated.

METHODS: A method based on the cumulative risk of cancer was used to estimate the probabilities using lung cancer data collected by the population-based Bombay Cancer Registry from the years 1982 to 2005. For evaluation of trends, a linear regression model based on the logarithm of the observed incidence rates was applied. The annual percentage change was also computed for the evaluation. The cumulative incidence rate percentage was calculated by adding up the age-specific incidence rates at single ages and then expressed as a percentage.

RESULTS: The results show that age-adjusted incidence rates of lung cancer during the period 1982 to 2005 showed a statistically significant decreasing trend in males and a statistically significant increasing trend among females. When these trends were examined across different age-groups (0-39, 40-64 and 65 or older), the rates showed a statistically significant decreasing trend from 0-64 years in males and a statistically significant increasing trend in females aged 65 years and older. The rates proved stable across the other age-groups. The probability estimates indicate that one out of every 74 men and one out of every 242 women will contract lung cancer at some time in their whole life in the absence of other causes of death, assuming that the current trends prevail over the time period. Most of them will acquire the disease after the age of 40 years, after which risk increases with time.

CONCLUSIONS: The variation in age-adjusted incidence rate across different age-groups in both sexes clearly indicate that there has been a change in the etiology of lung cancer in Greater Mumbai over time. The most important reason for this would be decrease in smoking prevalence among males. The other reasons for this have to be explored through risk assessment studies, but these findings may be of general interest because changes in diagnostic practices are confounders in time trends of lung cancer in many developed countries, preventing inferences on changes in risk factors.

PMID:19469629[PubMed - indexed for MEDLINE]


Abstract

BACKGROUND: A recent monograph by the International Agency for Research on Cancer (IARC) has identified indoor air pollution from coal usage as a known human carcinogen, while that from biomass as a probable human carcinogen. Although as much as 74% of the Indian population relies on solid fuels for cooking, very little information is available on cancer risk associated with these fuels in India.

METHODS: Using data from a multicentric case-control study of 799 lung and 1062 hypopharyngeal/laryngeal cancer cases, and 718 controls, we investigated indoor air pollution from various solid fuels as risk factors for these cancers in India.

RESULTS: Compared with never users, individuals who always used coal had an increased risk of lung cancer [odds ratio (OR) 3.76, 95% confidence interval (CI) 1.64-8.63]. Long duration of coal usage (>50 years) was a risk factor for hypopharyngeal (OR 3.47, CI 0.95-12.69) and laryngeal (OR 3.65, CI 1.11-11.93) cancers. An increased risk of hypopharyngeal cancer was observed among lifelong users of wood (OR 1.62, CI 1.14-2.32), however this was less apparent among never-smokers. Increasing level of smokiness inside the home was associated with an increasing risk of hypopharyngeal and lung cancer (P(trend) < 0.05).

CONCLUSION: This study showed differential risks associated with indoor air pollution from wood and coal burning, and provides novel evidence on cancer risks associated with solid fuel usage in India. Our findings suggest that reducing indoor air pollution from solid fuels may contribute to prevention of these cancers in India, in addition to tobacco and alcohol control programs.

PMID:18234740[PubMed - indexed for MEDLINE]

Abstract

The association of lung cancer incidence with bidi smoking was examined using a cohort study data in Karunagappally, Kerala, India. We sought interview of all the residents in Karunagappally with the population of 385,103 in 1991 census, and established a cohort of 359,619 (93% of the population in 1991) in the 1990s. There were 65,829 men aged 30-84 at interview after excluding those diagnosed as cancer or died of any cause before 1997. Among them, 212 newly diagnosed lung cancer cases were ascertained during the 8-year period between 1997 and 2004 through Karunagappally Cancer Registry. The relative risk (RR) of lung cancer was obtained from Poisson regression analysis of grouped data. Lung cancer incidence was relatively high among Moslem people and those with lower educational history. When taking into account attained age, religion and education, the RR between current bidi smokers and those who had never smoked bidis was 3.9 (95%CI = 2.6-6.0, p < 0.001). The lung cancer risk did not return to the level of non-smokers within 10 years after cessation. In further analyses using only those never smoked cigarettes to examine the effect of bidi smoking alone on lung cancer risk, current smokers of bidis had the RR of 4.6 (95%CI = 2.5-8.5, p < 0.001). Lung cancer incidence increased with larger amounts of bidi smoked a day (p < 0.001), with longer durations of smoking bidis (p < 0.001), and with younger ages starting smoking bidis (p < 0.001). Immediate measures should be taken to stop bidi smoking, which is common in south Asia.

PMID: 18623085 [PubMed - indexed for MEDLINE]


Abstract

Lung cancer is the most common cause of death throughout the world with cigarette smoking being established as the major etiological factor in lung cancer. Since not much information is available regarding the polymorphism in drug metabolizing enzymes and lung cancer risk in the Indian population, the present case-control study attempted to investigate the association of polymorphisms in cytochrome P450 1A1 (CYP1A1) and glutathione-S-transferase M1 (GSTM1) with risk to squamous cell carcinoma of lung malignancy. Patients suffering from lung cancer (n=200) and visiting OPD facility of Department of Radiotherapy, King George's Medical University, Lucknow, were included in the study. Equal number (n=200) of age and sex matched healthy individuals were also enrolled in the study. Our data revealed that the variant genotypes of CYP1A1*2A, CYP1A1*2C and CYP1A1*4 were found to be over represented in the lung cancer patients when compared to controls. CYP1A1*2A variant genotypes (combined heterozygous and mutant genotypes) revealed significant association towards the lung cancer risk (OR: 1.93, 95%CI: 1.28-2.89, p=0.002). Likewise, GSTM1 null genotypes were found to be over represented in patients when compared to controls. Haplotype analysis revealed that CYP1A1 haplotype, C-G-C increased the lung cancer risk (OR: 3.90, 95%CI: 1.00-15.04, p=0.025) in the patients. The lung cancer risk was increased several two-to fourfold in the patients carrying the genotype combinations of CYP1A1*2A and GSTM1 suggesting the role of gene-gene interaction in lung cancer. Cigarette smoking or tobacco chewing or alcohol consumption was also found to interact with CYP1A1 genotypes in increasing the risk to lung cancer further demonstrating the role of gene-environment interaction in development of lung cancer.

PMID:18082227[PubMed - indexed for MEDLINE]


Abstract

OBJECTIVES: Tobacco smoking is the most common risk factor for lung cancer. But a significant proportion of lung cancer occurs in non-smokers. Indoor pollution due to domestic fuels has been recently implicated as a causative agent in lung cancer especially in women. We conducted a case control study to find out the role of indoor air pollution due to domestic cooking fuels in Indian women.
METHODS: In a case control study 67 women with proven lung cancer were recruited. Forty-six females having a non-malignant respiratory disease constituted the control group. The patients and controls were asked about the exposure in various cooking fuels using a questionnaire.

RESULT: There were 50 (74.6%) non-smokers and 17 (25.4%) smokers among the female cancer cases (p = 0.016). Adenocarcinoma was the commonest histological type of malignancy (n = 26, 38.8%) in the whole group and was the predominant form in the nonsmoking females. Tobacco smoking was the most important risk factor for lung cancer with OR of 4.87 (95% CI 1.34-17.76). Among non-smokers out of all the cooking fuels the risk of development of lung cancer was highest for biomass fuel exposure with an odds ratio of 5.33 (95% CI 1.7-16.7). Use of mixed fuels was associated with a lesser risk (OR = 3.04, 95% CI 1.1-8.38). In multivariate logistic regression analysis biomass fuel exposure was still significant with OR of 3.59 (95% CI 1.07-11.97) even after adjusting for smoking and passive smoking.

CONCLUSION: This study indicated that biomass fuel exposure is an important risk factor in the causation of lung cancer among women in addition of exposure to tobacco smoke.

PMID:15926600[PubMed - indexed for MEDLINE]


Abstract

BACKGROUND: Lung cancer is one of the commonest malignant neoplasms all over the world. It accounts for more cancer deaths than any other cancer. It is increasingly being recognized in India.

METHODS: We did a systematic review of the published studies on epidemiology, diagnosis and treatment of lung cancer in India. Literature from other countries was also reviewed.

RESULTS: With increasing prevalence of smoking, lung cancer has reached epidemic proportions in India. It has surpassed the earlier commonest form of cancer, that of oropharynx, and now is the commonest malignancy in males in many hospitals. In addition to smoking, occupational exposure to carcinogens, indoor air pollution and dietary factors have recently been implicated in the causation of lung cancer. Squamous cell carcinoma is still the commonest histological type in India in contrast to the Western countries, although adenocarcinoma is becoming more common. Molecular genetics of lung cancer has opened up new vistas of research in carcinogenesis. Various modalities for early detection through screening are being investigated. Majority of the patients have locally advanced or disseminated disease at presentation and are not candidates for surgery. Chemotherapy applied as an adjunct with radiation improves survival and the quality of life. New anticancer drugs, which have emerged during the last decade, have shown an improved efficacy-toxicity ratio.

CONCLUSIONS: In view of our large population, the burden of lung cancer will be quite enormous in India. Drastic measures aimed at discouraging people from smoking must be taken to reduce the morbidity and mortality due to lung cancer.

PMID:15515828[PubMed - indexed for MEDLINE]


Abstract

BACKGROUND: Cancer of the esophagus is common in India. The risk factors predisposing to cancer in southern Indian patients are not known.

AIM: To determine the role of smoking, alcohol and their combination, and diet factors in the etiology of cancer of the esophagus.

METHODS: Risk factors like alcohol consumption, smoking, tobacco chewing, and pre-illness diet details in 90 patients with cancer of the esophagus were compared with those in age- and sex-matched control subjects.
RESULTS: The risk for esophageal cancer was 3.5 times higher with alcohol consumption, 2.5 times higher for tobacco users, and 2.8 times higher each for betel nut chewers and smokers. The calculated odds ratio for the social habits and diet factors was significant amongst cases of cancer esophagus.

CONCLUSION:

Alcoholism, smoking, and chewing of tobacco are factors predisposing to esophageal cancer in southern India.

Comment in

- Tea or tobacco: etiology of esophageal cancer in India. [Indian J Gastroenterol. 2004]
  PMID:15106710[PubMed - indexed for MEDLINE]


Abstract

In India, lung cancer is one of the most common and lethal cancers, and tobacco smoking remains its most important etiologic factors. The objective of our study is to examine the effects of different tobacco consumption forms, including smoking and chewing, on lung cancer risk of men in southern India, especially to compare the effects of bidi smoking to cigarette smoking on lung carcinogenesis. We also evaluated the possible role of Indian alcohol beverages and non-Indian alcohol beverages on lung carcinogenesis. We conducted in Chennai and Trivandrum. In total, 778 lung cancer cases and 3,430 controls, including 1,503 cancer controls and 1,927 healthy controls, were recruited. The effects of cigarette, bidi smoking, chewing and alcohol drinking on the risk of lung cancer were estimated from unconditional multivariate logistic regression. We also applied the generalized additive model (GAM) with locally-weighted running-line smoothers (loess) to find the most plausible curve for the dose-response relationship. The results from GAM suggest a plateau after 35 years of smoking or 10 cigarette-equivalent pack-years for both cigarette and bidi. The OR is 4.54 (95%CI=2.96-6.95) and 6.45 (95%CI=4.38-9.50) for more than 30 years of cigarette-only and bidi-only smoking, respectively, and 6.87 (95%CI=4.62-10.2) and 10.7 (95%CI=5.82-19.6) for more than 12 weighted cumulative cigarette-only and bidi-only consumption, respectively. The lung cancer risk of former cigarette smokers drops down more quickly after quitting smoking compared to former bidi smokers. There is no evidence for the effect of chewing and lung cancer risk nor clear evidence of an effect of overall alcohol drinking among never-smokers, although Indian alcohol drinking seemed to remain associated with lung cancer risk under limited power (OR=2.67, 95%CI=1.02-7.02). Bidi smoking seems to have a stronger carcinogenic effect than cigarette smoking: this difference holds no matter which aspect of smoking was considered.

PMID: 14506745 [PubMed - indexed for MEDLINE]


Abstract

OBJECTIVES: The aim of the study was to evaluate the clinical spectrum of the lung cancer in the Indian patients.

METHODS: All the patients above the age 60 years referred to the chest clinic of Apollo Hospitals, during the period 1989-2000 were evaluated for lung cancer with fibreoptic bronchoscopy, fluoroscopic guided transbronchial lung biopsy, transbronchial, needle aspiration and/or CT guided percutaneous fine needle aspiration biopsy. Retrospective data of 1400 patients was analyzed statistically.

RESULTS: There were 512 patients (439 males, 73 females) with confirmed primary lung cancer. There were 62% ex-smokers, 10% current smokers and 28% non-smokers amongst males, whereas amongst females there were 10% ex-smokers and 90% non-smokers. Cough of more than 3 weeks duration was the commonest symptom seen in 85% (n = 435) followed by fever and weight loss. Radiologically the commonest feature was
collapse-consolidation in 77% (n = 397). Central endobronchial tumours were seen in 204 patients (39.8%), whereas peripheral tumours were seen in 308 (60.2%). The diagnostic yield of transbronchial lung biopsy alone was as high as 48%, whereas the yield on CT guided percutaneous fine needle aspiration biopsy alone ranged from 32%-40%. There was no statistical difference in histological subtypes (non-small cell or small cell lung cancer) in the various groups studied. However, in those patients above the age of 80 years (group C) small cell lung cancer was more frequently seen.

CONCLUSION: Primary lung cancer should always be suspected in elderly Indian subjects with unexplained cough and other constitutional symptoms of weight loss and fever.

PMID:14719585[PubMed - indexed for MEDLINE]


Abstract

Oral, pharyngeal and esophageal cancers are 3 of the 5 most common cancer sites in Indian men. To assess the effect of different patterns of smoking, chewing and alcohol drinking in the development of the above 3 neoplasms and to determine the interaction among these habits, we conducted a case-control study in Chennai and Trivandrum, South India. The cases included 1,563 oral, 636 pharyngeal and 566 esophageal male cancer patients who were compared with 1,711 male disease controls from the 2 centers as well as 1,927 male healthy hospital visitors from Chennai. We observed a significant dose-response relationship for duration and amount of consumption of the 3 habits with the development of the 3 neoplasms. Tobacco chewing emerged as the strongest risk factor for oral cancer, with the highest odds ratio (OR) for chewing products containing tobacco of 5.05 [95% confidence internal (CI) 4.26-5.97]. The strongest risk factor for pharyngeal and esophageal cancers was tobacco smoking, with ORs of 4.00 (95% CI 3.07-5.22) and 2.83 (95% CI 2.18-3.66) in current smokers, respectively. An independent increase in risk was observed for each habit in the absence of the other 2. For example, the OR of oral cancers for alcohol drinking in never smokers and never chewers was 2.56 (95% CI 1.42-4.64) and that of esophageal cancers was 3.41 (95% CI 1.46-7.99). Furthermore, significant decreases in risks for all 3 cancer sites were observed in subjects who quit smoking even among those who had quit smoking 2-4 years before the interview.

PMID:12740918[PubMed - indexed for MEDLINE]


Abstract

Between 1996 and 1999, we carried out a study in Southern India on risk factors for oral cancer. The study included 591 incident cases of cancer of the oral cavity (282 women) and 582 hospital controls (290 women). Height was unrelated to oral cancer risk. Body mass index (weight in kilograms/height in metres squared) was inversely associated with risk (P for trend=0.001). Paan chewers with low BMI were at particularly high risk. Risk was increased among subjects consuming meat (odds ratio (OR) 1.54, 95% confidence interval (CI) 1.00-2.37), ham and salami (OR 4.40, 95% CI 2.88-6.71) two or more times per week. Frequent consumption of fish, eggs, raw green vegetables, cruciferous vegetables, carrots, pulses, apples or pears, citrus fruit, and overall consumption of vegetables and fruit decreased oral cancer risk (P for trend for each of these items less than or equal to 0.001). The risk associated with low consumption of vegetables was higher among smokers than among non-smokers. Men, but not women, who practised oral sex had an increased oral cancer risk (OR 3.14, 95% CI 1.15-8.63). Women with more than one sexual partner during life were at increased oral cancer risk (OR 9.93, 95% CI 1.57-62.9).

PMID:12671537[PubMed - indexed for MEDLINE]

2.1.3. Abdominal cancers

Abstract

Hepatocellular carcinoma (HCC) cases are underreported in India. Our study was designed to investigate the etiological profile of HCC cases in India and compare with global incidence. The study included 348 HCC and 375 chronic liver disease cases without HCC as controls. Samples were screened for hepatitis B virus (HBV)/hepatitis C virus (HCV) infections using enzyme-linked immunosorbent assay and polymerase chain reaction (PCR). HBV-DNA and HCV-RNA genotyping was performed by PCR-restriction fragment length polymorphism. All cases were also assessed for other possible risk factors of HCC. Among HCC cases, 62.6% were positive for HBV, 26.7% for HCV and 3.2% had coinfection. Around 17% of HCC cases had aflatoxin-B1 exposure. HBV genotype D (odds ratio, OR = 1.76) and mixed genotypes (OR = 6.86) had higher risk of HCC development. The risk of HCC was twofold (OR = 2.26) in patients with high HBV-DNA levels. Moreover, our findings were unable to establish a clear differential effect of HCV genotype (OR = 1.48) and high viral load (OR = 1.21) on HCC development. In India, HBV is the major risk factors, whereas alcohol, smoking and diabetes are nonsignificantly associated. Asian countries such as Hong Kong and Taiwan also had high incidence of HBV-related HCC. Contrarily, countries from Europe and USA reported HCV as predominant cause of HCC. Further, aflatoxin could be a possible risk of HCC in the population. However, in comparison to the countries such as China and Taiwan (high Aflatoxin exposure), the aflatoxin level is relatively low in our patients. High HBV-DNA levels and HBV/D increased the risk of HCC. However, neither genotype nor virus loads of HCV affected prognosis of HCC patients in our study.

PMID:23233429[PubMed - indexed for MEDLINE]


Abstract

Gastric cancer has been reported to be a highly prevalent malignancy in Kashmir, where together with esophageal cancer it accounts for more than 60% of all cancers, much higher than in other parts of the region. Particular life style habits like consumption of salted tea and tobacco smoking by hookah, as well as Helicobacter pylori infection, are often mentioned in the context of risk factors. However, the majority of the population does not consume alcohol and the prevalence of H. pylori does not appear to explain the high incidence of gastric cancer in the population. Other prevalent habits of gastric cancer patients are presented here along with demographic and tumor details. In future, well designed studies of incidence rates (population based) are essential along with investigations of reported and suspected risk factors.

PMID: 21517276 [PubMed - indexed for MEDLINE]


Abstract

The incidence of stomach cancer in India is lower than that of any other country around the world. However, in Mizoram, one of the north-eastern state of India, a very high age-adjusted incidence of stomach cancer is recorded. A hospital-based case-control study was carried out to identify the influence of tobacco use on the risk of developing stomach cancer in Mizoram. Among the cases, the risk of stomach cancer was significantly elevated among current smokers [odds ratio (OR), 2.3; 95% confidence interval (95% CI), 1.4-8.4] but not among ex-smokers. Higher risks were seen for meiziol (a local cigarette) smokers (OR, 2.2; 95% CI, 1.3-9.3). The increased risk was apparent among subjects who had smoked for >or=30 years. The increased risk was significant with 2-fold increase in risk among the subjects who smoked for >or=11 pack-years. The risk increased with increasing cumulative dose of tobacco smoked (mg). Tuibur (tobacco smoke-infused water), used mainly in Mizoram, seemed to increase the risk of stomach cancer among current users in both univariate and multivariate models (OR, 2.1; 95% CI, 1.3-3.1). Tobacco chewer alone (OR, 2.6; 95% CI, 1.1-4.2) showed significant risk. Tobacco use in any form [smoking and smokeless (tuibur and chewing)] increased the risk of stomach cancer in Mizoram independently after adjusting for confounding variables.

PMID: 16103433 [PubMed - indexed for MEDLINE]

Abstract

Stomach cancer incidence rates are much lower in India than elsewhere, but the stomach remains one of the 10 leading sites of cancer in both sexes in most of the metropolitan registries. This is an unmatched case-control study of stomach cancer carried out at Tata Memorial Hospital (TMH), Mumbai. Our purpose was to identify the association of tobacco and alcohol use, occupational hazards, diet, consumption of beverages like tea and coffee, the living environment, cooking media and literacy with stomach cancer. Our study included 170 stomach cancer cases and 2,184 hospital controls interviewed during the period 1988-1992. Tobacco chewing, bidi or cigarette smoking and alcohol drinking did not emerge as high risk factors for stomach cancer. Consumption of dry fish at least once a week compared to never or once a every 2 weeks showed a 12-fold excess risk (OR = 12.4, 95% CI 7.0-22.1, p < 0.0001) for stomach cancer among the non vegetarian food items considered. A protective effect of tea consumption (OR = 0.4, 95% CI 0.2-0.9, p = 0.03), showing 59% reduction in risk, was identified, which could be of use for possible control and prevention of this cancer.

PMID: 12115507 [PubMed - indexed for MEDLINE]

2.1.4. Other cancers


Abstract

OBJECTIVE: Inflammation is an important hallmark of all cancers and net inflammatory response is determined by a delicate balance between pro- and anti-inflammatory cytokines, which may be affected by tobacco exposure, so the present study was designed to explore the effect of various modes of tobacco exposure on interleukin-12 (IL-12) and interleukin-10 (IL-10) inflammatory cytokine levels and survival in prostate carcinoma (PCa) patients.

METHODS: 285 cancer patients and equal controls with 94 BPH (benign prostatic hyperplasia) were recruited; baseline levels of serum IL-12 and IL-10 were measured and analyzed in various tobacco exposed groups by appropriate statistical tool. Five-year survivals of patients were analyzed by Log-rank (Mantel-Cox) test (graph pad version 5).

RESULTS: The expression of serum proinflammatory (IL-12) and anti-inflammatory (IL-10) cytokines was correlated with tobacco exposed group as smokers, chewers, and alcohol users have shown significantly higher levels (P < 0.001) with significantly lower median survivals (27.1 months, standard error = 2.86, and 95% CI: 21.4-32.62); than nonusers. Stages III and IV of tobacco addicted patients have also shown significantly increased levels of IL-12 and IL-10.

CONCLUSIONS: IL-12 and IL-10 seem to be affected by various modes of tobacco exposure and inflammation also affects median survival of cancer patients.


Abstract

Northeast region of India shows high incidence of tobacco-related cancer with widespread consumption of betel quid and tobacco in different forms. There is an increasing incidence of breast cancer and eminent use of tobacco in females in this region. Thus, we analysed the role of tobacco exposure and polymorphisms in detoxification enzymes in breast cancer risk. Polymorphisms in five gene variants (GSTM1, GSTT1, GSTP1, TP53 and CYP17) and four environmental exposure variables (tobacco smoking, tobacco chewing, betel quid
chewing, alcohol) were analysed in 117 breast cancer cases and 174 cancer free controls. Multifactor dimensionality reduction identified betel quid chewing as the single main risk factor and women with betel quid chewing history had five times the risk of developing breast cancer [4.78 (2.87-8.00) 0.001]. In logistic regression analysis, GSTT1 null and GSTM1 null genotypes conferred 41% less [0.59 (0.34-1.03) 0.06] and 55% less [0.58 (0.30-1.02) 0.05] reduced risk to breast cancer, respectively. However, the risk increased in women with GSTP1 variant G allele which conferred 1.43 times [(0.96-2.11) 0.07] more risk to breast cancer. In conclusion this study suggests betel quid chewing as a significant risk factor for developing breast cancer. Moreover, the lack of detoxification enzymes GSTT1 and GSTM1 are associated with reduced breast cancer risk.

PMID: 20728566 [PubMed - indexed for MEDLINE]


**Abstract**

Human papilloma virus (HPV) infection is a major cause of cervix cancer, but a number of infected women do not develop invasive lesions, suggesting that HPV infection in itself is not a sufficient factor and that other cofactors, such as smoking, play an important role in development of cervix cancer. Alongside active cigarette smoking, passive smoking is an independent risk factor for cervix cancer. Smoking maintains cervical HPV infection longer and decreases potential of clearing an oncogenic infection. Thus, it is quite possible that polymorphism at detoxifying enzyme coding loci such as GSTM1, GSTT1, and GSTP1 may determine susceptibility to cervix cancer. This study evaluates the combined effects of genetic polymorphisms of GSTM1, GSTT1, and GSTP1 on susceptibility to cervical cancer and interaction of these genes with smoking. On individual analysis of GSTM1, GSTT1, and GSTP1, it was observed that passive smokers having genotypes GSTM1 (null) (OR = 7.0, 95% CI = 2.19-22.36, P = 0.0005), GSTT1 (null) (OR = 10.2, 95% CI = 1.23-84.18, P = 0.02), and GSTP1 (ile/val) (OR = 6.4, 95% CI = 2.25-18.38, P = 0.0005) have an increased risk of developing cervix cancer. It is thus concluded that cervical cancer risk is increased in passive smokers with GSTM1 (null), GSTT1 (null), and GSTP1 (ile/val) genotypes.

PMID:16631467 [PubMed - indexed for MEDLINE]

**2.2. Non-cancerous diseases**


**Abstract**

**BACKGROUND & OBJECTIVES:** A comprehensive risk factor profile of non-communicable diseases (NCDs) as suggested by the World Health Organization (WHO) has not been reported from tribal population in India. This survey was carried out to assess the prevalence of NCD risk factors among Mishing tribes in Assam using the WHO STEPs approach.

**METHODS:** A total of 332 individuals of the Mishing tribe (men 54%) aged 25-64 yrs. were selected from Tinsukia district by multistage cluster sampling. Using the WHO STEPs approach information was collected on demographics, STEP 1 variables (tobacco, alcohol, physical activity, diet) and measured STEP 2 variables (weight, height, waist circumference and blood pressure). Multivariate analysis was used to find the relation between STEP 1 and STEP 2 variables.

**RESULTS:** Overall, tobacco use was 84 per cent (men 94%; women 73%, p0 <0.001) and alcohol use was 67 per cent (men 82%; women 50%, p0 <0.05); 86 per cent reported vigorous physical activity, (men 91%, women 82%, p0 < 0.05). Sixty eight per cent reported to consume unhealthy diet (less than five servings of fruits and vegetables/day). 11 per cent had abdominal obesity, 16 per cent were overweight and 26 per cent had hypertension. Non users of tobacco and those who consumed more fruits and vegetables had higher prevalence of overweight (p0 <0.05). Among the hypertensives, 24 per cent were aware, 17 per cent treated and 2.4 per cent controlled their hypertension. Older individuals had higher hypertension prevalence (p0 <0.05) compared to younger individuals.

**INTERPRETATION & CONCLUSIONS:** Tobacco use, alcohol use and unhealthy diet habits were high among men and women in this population and were major NCD risk factors. An integrated approach of culturally appropriate population level and high risk strategies are warranted to reduce these risk factors and to enhance adequate control of hypertension.

PMID: 25366204 [PubMed - in process] PMCID: PMC4248383
2.2.1. Tuberculosis


Abstract

Tobacco use and under-nutrition are major public health concerns and tuberculosis is a major cause of morbidity and mortality in India. Using a cohort of 148,173 persons (recruited 1991-1997 and followed-up 1997-2003) the joint effects of tobacco use and BMI on tuberculosis mortality was studied. Tobacco use in any form and low-BMI had joint effect on tuberculosis mortality and the interaction effect was synergistic in men and antagonistic in women. Self-reported tuberculosis was associated with increased risk of tuberculosis mortality. In contrast, no such association was observed for self-reported diabetes persons. The risk pattern remained unchanged even after excluding tuberculosis deaths occurred within 1(st) two years of follow-up. This study highlights importance of age consideration of individual while excluding early deaths. Around 27% male tuberculosis deaths were attributable to their being underweight and smoker, while 22% male and 37% female deaths were attributable to their being underweight and smokeless tobacco user.

PMID: 22848354 [PubMed - indexed for MEDLINE] PMCID: PMC3407144


No abstract available

PMID:23362707[PubMed - indexed for MEDLINE]


Abstract

BACKGROUND: India is home to the largest population of patients with tuberculosis and tobacco users in the world. Smokeless tobacco use exceeds smoking and is increasing. There is no study to date that reports smokeless tobacco use before and after the diagnosis and treatment of tuberculosis. We assessed smokeless tobacco use among former patients of tuberculosis in Karnataka, India.

METHODS: We conducted a community-based, cross sectional study among 202 men, who had been diagnosed and treated for tuberculosis (mean age 48 years), selected by multistage, random sampling. Using a semi-structured interview schedule, retrospective smoking and smokeless tobacco use were captured at eight time-points before and after the diagnosis and treatment of tuberculosis.

RESULTS: Most patients suspended tobacco use during treatment. A high 44% prevalence of smokeless tobacco use 6 months before diagnosis was reduced to just 8% during the intensive phase of treatment and climbed to 27% 6 months after treatment. The tobacco use relapse rate 6 months after completion of treatment was higher for smokeless tobacco use (52%, 95% CI 41%-62%) than for smoking (36%, 95% CI 26%-45%). We also found that many patients who were advised to quit smoking continued using smokeless tobacco after completion of treatment. Additionally, new smokeless tobacco use was documented. Of the 11 new exclusive smokeless tobacco users, 10 shifted from smoking to smokeless tobacco use as a form of harm reduction.

CONCLUSION: Patients with tuberculosis are advised by their doctors, at the time of diagnosis, to quit smoking. Several patients shift from smoking to smokeless tobacco use, which needs to be addressed while providing tobacco cessation services.

PMID:22963290[PubMed - indexed for MEDLINE]

Abstract

BACKGROUND: Although a known risk factor for several respiratory diseases, the relationship between cooking smoke and tuberculosis has not been conclusively established. Hence, a case-control study was conducted among adult women of Chandigarh Union Territory in India.

METHODS: Physician-diagnosed cases of sputum positive pulmonary tuberculosis (n=126) and age- and residence area-matched controls (n=252) were enrolled from clinics in urban, rural and slum areas. Interviews were conducted in the clinic using a pretested questionnaire to collect information on type of cooking fuel, education, occupation, socio-economic status, smoking, overcrowding and type of kitchen, etc. The conditional logistic regression model was used for control of confounding.

RESULTS: The study population was predominantly in the 20-29-year-old age group (58%) and lived in urban areas (67%). The majority were illiterate (52%) and housewives (93%), and nearly half (46%) had an income of no more than Rs 25,000. Among the cases, 20.6%, 27% and 52.4% used biomass fuel, kerosene and liquid petroleum gas (LPG), respectively, whereas among controls, the respective figures were: 12.3%, 26.2% and 61.5%. The unadjusted OR for biomass fuel compared with LPG was 2.33 (95% CI 1.18 to 4.59, p=0.01). Adjustment for confounding factors (education, type of kitchen, smoking tobacco and TB in a family member) and interaction between cooking fuel and smoker in family revealed an OR of 3.14 (95% CI 1.15 to 8.56, p=0.02) for biomass fuel in comparison with LPG.

CONCLUSIONS: Cooking with biomass fuel increases the risk for pulmonary tuberculosis.

PMID:21118950[PubMed - indexed for MEDLINE]


Comment on

- Diabetes; tuberculosis: a dangerous liaison; no white tiger. [Indian J Med Res. 2009]

PMID: 20090106 [PubMed - indexed for MEDLINE]


Abstract

BACKGROUND: To investigate the extent to which smoking and/or drinking can increase the incidence of pulmonary tuberculosis (TB), a population-based case-control study was conducted in rural south India.

METHODS: A total of 1839 males and 870 females treated in 2000-03 by state TB clinics were interviewed at home in 2004-05 about their education, smoking and drinking habits before disease onset. As controls, 2134 men and 2119 women without TB were randomly chosen from case villages and interviewed. Incidence rate ratios (RRs) are from logistic regression, adjusted for age and education.

RESULTS: No women smoked or drank. The main analyses are of men aged 35-64 years, 949 cases treated for new pulmonary TB and 1963 controls. In the study, 81.5% of the cases and 55.2% of the controls had ever smoked, yielding a standardized ever- vs never-smoker TB incidence RR of 2.7 [95% confidence interval (CI) 2.2-3.3, P < 0.00001]. Among control ever-smokers 96% still smoked, 71% used only bidis (mean 17 per day) and 28% used only cigarettes (mean 7 per day). After additional adjustment for alcohol, this RR was 2.2 (95% CI 1.7-2.7, P < 0.00001), but even among those who had never drunk alcohol the standardized ever- vs never-smoker RR was 2.6 (95% CI 2.0-3.6, P < 0.00001). The corresponding RRs for ever- vs never-drinking were...
somewhat less extreme: 2.2 (95% CI 1.8-2.6, P < 0.00001) without adjustment for smoking, 1.5 (95% CI 1.2-1.9, P = 0.00004) with adjustment for smoking and 2.1 (95% CI 1.4-3.0, 2P = 0.0001) among those who had never smoked. Among control ever-drinkers, 96% still drank and 99% used only spirits (mean 0.3 l/week).

CONCLUSIONS: This study of reliably confirmed disease (by the criteria of state TB clinics) demonstrates an increased incidence of pulmonary TB among those who smoke and among those who drink. The effects of smoking after adjustment for drinking were more definite than those of drinking after adjustment for smoking.

PMID:19498083[PubMed - indexed for MEDLINE]


CONCLUSIONS: This study of reliably confirmed disease (by the criteria of state TB clinics) demonstrates an increased incidence of pulmonary TB among those who smoke and among those who drink. The effects of smoking after adjustment for drinking were more definite than those of drinking after adjustment for smoking.

PMID:19700792 [PubMed - indexed for MEDLINE]


OBJECTIVES: To document smoking patterns among tuberculosis (TB) patients at eight different points of time before, during and after treatment, and to investigate the frequency and content of the quit smoking messages they received.

DESIGN: A stratified random sample of 215 male TB patients from Kerala, India, who had completed treatment in the previous 9 months was surveyed using a pre-tested semi-structured interview schedule.

RESULTS: Six months prior to diagnosis, 94.4% of male TB patients were ever smokers and 71.2% were current smokers. Although 87% of patients had quit smoking soon after diagnosis, 36% had relapsed by 6 months post treatment. One third relapsed during the first 3 months of treatment and another third during the next 3 months of treatment. Two thirds of all smokers received cessation advice from primary care physicians, but less than half received advice from others. Less than half of all messages were TB-specific; the rest were very general short instructions. Smoking more than 15 cigarettes/bidis at the time of diagnosis was significantly associated with a lower quit rate during treatment (OR 8.0, 95%CI 2.1-30.9).

CONCLUSION: Messages to not smoke often go unheeded among TB patients. Proactive efforts are needed to encourage health staff and DOTS providers to give strong cessation messages.

PMID:18812043[PubMed - indexed for MEDLINE]


OBJECTIVE: Although tuberculosis has already become uncommon in industrialised countries, is a major burden in many developing countries, including India. This paper examines the association between smoking (mainly bidi smoking) and tuberculosis in Mumbai, India.

METHOD: To study the possible association between smoking and tuberculosis, recruitment of a cohort of 81,443 men > or =35 years began in 1991 and was followed up to the end of 2003 in Mumbai.
RESULTS: The adjusted risk of tuberculosis deaths among bidi smokers was 2.60 (95% confidence interval (CI): 2.02, 3.33) times higher than never-smokers, with a significant trend for daily frequency of bidi smoking. Also the risk of prevalence of self-reported tuberculosis among bidi smokers was 5.23 (95% CI: 4.01, 6.82) times higher than never-smokers.

CONCLUSION: In India around 32% of tuberculosis deaths can be attributable to bidi smoking. Thus, bidi smoking seems to be an important cause of manifestation and death from tuberculosis.

PMID: 17391745 [PubMed - indexed for MEDLINE]


Abstract

BACKGROUND: In India most adult deaths involve vascular disease, pulmonary tuberculosis, or other respiratory disease, and men have smoked cigarettes or bidis (which resemble small cigarettes) for several decades. The study objective was to assess age-specific mortality from smoking among men (since few women smoke) in urban and in rural India.

METHODS: We did a case-control study of the smoking habits of 27000 urban and 16000 rural men who had died in the state of Tamil Nadu, southern India, from medical causes (i.e. any cause other than accident, homicide, or suicide), and of 20000 urban and 15000 rural male controls. The main analyses are of mortality at ages 25-69 years.

FINDINGS: In the urban study area, the death rates from medical causes of ever smokers were double those of never smokers (standardised risk ratio at ages 25-69 years 2.1 [95% CI 2.0-2.2]). The risks were substantial both for cigarette smoking (the main urban habit) and for bidi smoking. Of this excess mortality among smokers, a third involved respiratory disease, chiefly tuberculosis (4.5 [4.0-5.0], smoking-attributed fraction 61%), a third involved vascular disease (1.8 [1.7-1.9], smoking-attributed fraction 24%), 11% involved cancer (2.1 [1.9-2.4], smoking-attributed fraction 32%), chiefly of the respiratory or upper digestive tracts, and 14% involved alcoholism or cirrhosis (3.3 [2.9-3.8], not attributed to smoking). Among ever smokers, the absolute excess mortality from tuberculosis was substantial throughout the age range 25-69 years. (A separate survey of 250000 men living in the urban study area found that ever smokers are three times as likely as never smokers to report a history of tuberculosis, corresponding to a higher rate of progression of chronic subclinical infection to clinical disease.) The proportional excesses of respiratory, vascular, and neoplastic mortality at ages 25-69 years among ever smokers in the urban study area were replicated, each with similarly narrow CI for the risk ratio, in the rural study area (where bidi smoking predominated), and are taken to be largely or wholly causal. For urban and for rural death from medical causes at older ages (> or =70 years), the standardised risk ratio was 1.3.

INTERPRETATION: Smoking, which increases the incidence of clinical tuberculosis, is a cause of half the male tuberculosis deaths in India, and of a quarter of all male deaths in middle age (plus smaller fractions of the deaths at other ages). At current death rates, about a quarter of all male deaths in middle age (plus smaller fractions of the deaths at other ages). At current death rates, about a quarter of all male deaths in middle age (plus smaller fractions of the deaths at other ages). At current death rates, about a quarter of all male deaths in middle age (plus smaller fractions of the deaths at other ages).

PMID: 12932381 [PubMed - indexed for MEDLINE]

2.2.2. Cardiovascular diseases


Abstract

This study compared genetic polymorphisms (factor V Leiden [FVL] 1691G/A, factor VII [FVII] 10976G/A, FVII HVR4, platelet membrane glycoproteins GP1BA 1018C/T, GP1BA VNTR, integrin ITGB3 1565T/C, ITGA2 807C/T and methylenetetrahydrofolate reductase [MTHFR] 677C/T), biochemical (fibrinogen and homocysteine), and conventional risk factors in 184 young and 166 elderly north Indian patients with acute myocardial infarction (AMI). Univariate analysis revealed higher prevalence of hypertension and obesity in elderly patients while smoking, alcohol intake, and low socioeconomic status in young patients (P < .001). Although mean fibrinogen predominated (P = .01) in elderly patients, mean homocysteine was higher (P < .001) among young patients. Prevalence of hyperhomocysteinemia was greater in young than in elderly patients (odds ratio: 2.8, 95% confidence interval: 1.8-4.4, P < .001); however, genetic polymorphisms were equally prevalent in young and
Prevalence of hyperhomocysteinemia was greater in young than in elderly patients (odds ratio: 2.8, 95% predominated (P = .01) in elderly patients, mean homocysteine was higher (P < .001) among young patients.

smoking, alcohol intake, and low socioeconomic status in young patients (P < .001). Although mean fibrinogen (AMI). Univariate analysis revealed higher prevalence of hypertension and obesity in elderly patients while smoking seems to be an important cause of manifestation and death from tuberculosis.

RESULTS:

India

Annotated bibliography of scientific studies done on tobacco topic in WHO South-East Asia Region countries
in east Asians. Higher body mass index is a weak risk factor for mortality from cardiovascular disease in south Asians.

PMID: 24473060 [PubMed - indexed for MEDLINE] PMCID: PMC3788174


Abstract

Smoking is an important cardiovascular risk factor, however, use of smokeless tobacco has not been well studied. Smokeless tobacco use is high in countries of South and Southeast Asia, Africa and Northern Europe. Meta-analyses of prospective studies of smokeless tobacco users in Europe reported a relative risk for fatal coronary heart disease of 1.13 (confidence intervals 1.06-1.21) and fatal stroke of 1.40 (1.28-1.54) while in Asian countries it was 1.26 (1.12-1.40). Case-control studies reported significantly greater risk for acute coronary events in smokeless tobacco users (odds ratio 2.23, 1.41-3.52), which was lower than smokers (2.89, 2.11-3.96), and subjects who both chewed and smoked, had the greatest risk (4.09, 2.98-5.61). There is a greater prevalence of hypertension and metabolic syndrome in users of smokeless tobacco. Smokeless tobacco use leads to accelerated atherothrombosis similar to smoking. There is an urgent need for public health and clinical interventions to reduce smokeless tobacco addiction.

PMID: 23992997 [PubMed - indexed for MEDLINE] PMCID: PMC3860689


Abstract

Non communicable diseases in most of the developing countries have surpassed the morbidity and mortality arising from communicable diseases. However there are people who continue to suffer from the residual disabilities of some communicable disease acquired at younger age like polio and develop non communicable diseases like COPD and coronary syndrome at older age primarily because of their tobacco habits. Both of these combination of communicable and non communicable diseases are preventable if timely preventive measures and healthy life style is adopted. This case highlights one such case where patient despite suffering from polio and restrictive lung disease started using tobacco and suffered from obstructive lung disease and coronary syndrome.

PMID: 23897524[PubMed - indexed for MEDLINE]


Abstract

AIMS: The goal of this study was to investigate the changes in arterial stiffness by evaluation of arterial stiffness index and pulse wave velocity in community dwelling tobacco user females and to correlate those changes with duration of tobacco use, amount consumed and severity of addiction.

METHODS: This observational cohort study was conducted in Department of Medicine at Dr. S N Medical College, Jodhpur, comprised of 100 females, out of which 55 were community dwelling females using tobacco (cases) and 45 are age-sex matched healthy control group. Out of 55 tobacco user females 21 (38%) were smoker and 34 [62%] were smokeless tobacco user. Pulse wave velocity and arterial stiffness index were evaluated by means of an 8-channel real-time PC-based simultaneous acquisition and analysis system (Periscope).

RESULTS: Average C-F PWV in tobacco user female was 1327 +/- 515.2 as compared to 796 +/- 157.3 in control and average ASI was 71 +/- 20.9 in tobacco user female as compared to 62 +/- 13.9 in control that is statistically significant (p < or = .05). Both C-F PWV and ASI were significantly higher in tobacco user than...
control. Average C-F PWV in smoker group is 1683 +/- 566.7 as compared to 1108 +/- 387.9 in smokeless group. Average ASI is 76 +/- 22.9 in smoker group as compared to 66 +/- 18.9 in smokeless tobacco user group. Both C-F PWV and ASI were higher in smoker group than smokeless group that is statistically significant (P Value 0.0018).

CONCLUSIONS: This study has demonstrated that PWV and ASI are increased in tobacco user females and they are independent predictor of cardiovascular morbidity. Tobacco use either smoking or smokeless causes Atherovascular diseases. Smoking is more prone to increase atherosclerosis and cardiovascular morbidity in comparison to smokeless tobacco use.

PMID:23405536[PubMed - indexed for MEDLINE]


Abstract

Prevention of tobacco use is critical for primordial prevention of cardiovascular diseases. Low- and middle-income countries such as India face a burgeoning burden of tobacco-related cardiovascular diseases. A focus on adolescents and young people is consistent with a primordial approach to cardiovascular disease prevention and appropriate given the natural history of tobacco use, in regards to its onset and progression. The primordial prevention approach is feasible, because it attempts to bring about behavior change (sustained abstinence for nonusers) at the population level. This paper reviews effective strategies for population-based tobacco control among adolescents including settings-based interventions at school, at home, and in the community, as well as policy and media interventions. It goes on to briefly touch on the pivotal role that medical professionals, particularly cardiologists, play in fortifying such interventions and summarizes some key recommendations based on review of evidence on the effectiveness of these interventions.


No abstract available


Abstract

BACKGROUND AND OBJECTIVE: Urban subjects have high burden of cardiovascular risk factors, therefore, to evaluate risk factors in middle socioeconomic subjects and to study secular trends we performed an epidemiological study.

METHODS: The study was performed at urban middle class locations defined according to municipal records in years 2009-10. Stratified random sampling using house-to-house survey was performed. Details of medical history, anthropometry and clinical examination were recorded and biochemical tests performed for estimation of fasting glucose and lipids. Current definitions were used for risk factor classification. Descriptive statistics are provided. Trends were calculated using ANOVA or Mantel Haenszel chi-square. Univariate and multivariate logistic regression was performed to assess risk factor determinants. To determine secular trends we compared risk factors with previous cross-sectional studies performed in same locations in years 2002-3 and 2004-5 in subjects 20-59 years age.

RESULTS: We evaluated 739 subjects (men 451, women 288, response 67%). Age-adjusted prevalence (%) of risk factors in men and women respectively was smoking 95 (21.1) and 12 (4.2), low physical activity 316 (69.6) and 147 (52.3), high fat intake > or = 20 gm/day 278 (73.4) and 171 (68.7), low fruits and vegetables intake < 3 helpings/day 249 (70.3) and 165 (76.4), overweight/obesity 205 (46.2) and 142 (50.7), high waist size 58 (12.9) and 76 (26.6), high waist:hip 143 (31.9) and 154 (53.9), hypertension 177 (39.5) and 71 (24.6), high total cholesterol > or = 200 mg/dl 148 (33.0) and 93 (32.7), low HDL cholesterol < 40/50 mg/dl 113 (25.1) and 157 (55.3), diabetes 62 (15.5) and 25 (10.8) and metabolic syndrome 109 (25.1) and 61 (22.0). Age-associated increase was observed in body mass index, waist size, waist ratio:hip, systolic blood pressure and fasting and total cholesterol, non-HDL cholesterol and triglycerides in women (P<0.01). Age related increase was also observed in prevalence of obesity, truncal obesity, hypertension, diabetes and metabolic syndrome (P<0.01).

PMID:24473060 [PubMed - indexed for MEDLINE] PMCID: PMC3788174

Gupta R, Gupta N, Khedar RS. Atherovascular diseases. Smoking is more prone to increase atherosclerosis and cardiovascular morbidity in comparison to smokeless tobacco use.

Abstract


Average C-F PWV in smoker group is 1683 +/- 566.7 as compared to 1108 +/- 387.9 in smokeless group. Average ASI is 76 +/- 22.9 in smoker group as compared to 66 +/- 18.9 in smokeless tobacco user group. Both C-F PWV and ASI were higher in smoker group than smokeless group that is statistically significant (P Value 0.0018).

CONCLUSIONS: This study has demonstrated that PWV and ASI are increased in tobacco user females and they are independent predictor of cardiovascular morbidity. Tobacco use either smoking or smokeless causes Atherovascular diseases. Smoking is more prone to increase atherosclerosis and cardiovascular morbidity in comparison to smokeless tobacco use.

PMID:23992997 [PubMed - indexed for MEDLINE] PMCID: PMC3860689
0.01). On univariate analysis significant determinants of risk factors were low educational and socioeconomic status for smoking, high fat diet for obesity and hypertension, low fruits and vegetables intake for metabolic syndrome, and low physical activity or obesity but on age-and sex-adjusted multivariate analysis only association was high fat diet with obesity and hypertension (logistic regression analysis p < 0.05). Compared to studies performed at similar locations in years 2002-03 and 2005-06 there was increasing trend in prevalence of high non-HDL cholesterol and hypertriglyceridemia (Ptrend < 0.05) while other risk factors did not change significantly.

CONCLUSIONS: There is a high prevalence of multiple cardiovascular risk factors in Indian middle class individuals. Secular trends demonstrate a persistent high prevalence and increasing non-HDL cholesterol and triglycerides over 8-year period.

PMID: 22799108 [PubMed - indexed for MEDLINE]


Abstract

Cardiovascular diseases (CVDs) are one of the major causes of mortality and morbidity in the world. Tobacco consumption forms a major preventable risk factor for CVDs globally. The main objectives of this review paper is a) to review the evidence linking tobacco consumption to various CVDs, b) argue in favor of starting young for primary prevention of CVDs by controlling tobacco use among adolescents, c) provide an overview of major adolescent tobacco control interventions and d) propose the possible role cardiologists can play in tobacco control. We used SCOPUS, Ovid and PubMed databases using a predefined inclusion and exclusion criteria in order to find the evidence tobacco consumption and various CVDs and successful interventions to control tobacco use amongst adolescents. The evidence was then synthesized according to the objectives. The study concluded that prevention of tobacco is easier than cessation approaches due to the very addictive nicotine which is the main ingredient in tobacco products. Cardiologists in all countries are important stakeholders to be involved in all aspects of tobacco control including evidence generation, promoting prevention and cessation at all levels.


Abstract

India is in the middle of the epidemiological transition, with the burden of disease shifting towards chronic conditions, of which cardiovascular diseases (CVDs) form a major part. Findings from the Framingham Heart Study (FHS) have tremendous potential to circumvent the projected increase in CVD burden in India, as they highlight the importance of measuring risk in individuals and populations, and preventing future onset of disease. The findings of the FHS have stimulated several cross-sectional studies in India documenting a high and increasing burden of CVD risk factors. These have led to policy level changes in the country, in the form of Framework Convention on Tobacco Control ratification, and the National Program on Diabetes, CVD, and Stroke. There is now need for an Indian cohort study on the lines of the FHS, which can more closely evaluate the use of the FHS risk score among Indians and translate FHS findings into the Indian context.

PMID: 20620422 [PubMed - indexed for MEDLINE]


Abstract

Cigarette smoking is common in societies worldwide and a growing body of evidence suggests that chronic cigarette smoking may affect the structure and function of cardiovascular system. The chronic exposure to high levels of nicotine, a major component of cigarette smoking, has been observed to play a pathogenic role in the induction and progression of cardiovascular disorders including cardiomyopathy and peripheral vascular disease.
Coronary heart disease (CHD) is epidemic in India and one of the major causes of disease-burden and deaths. Mortality data from the Registrar General of India shows that cardiovascular diseases are a major cause of death in India now. Studies to determine the precise causes of death in urban Chennai and rural areas of Andhra Pradesh have revealed that cardiovascular diseases cause about 40% of the deaths in urban areas and 30% in rural areas. Analysis of cross-sectional CHD epidemiological studies performed over the past 50 years reveals that this condition is increasing in both urban and rural areas. The adult prevalence has increased in urban areas from about 2% in 1960 to 6.5% in 1970, 7.0% in 1980, 9.7% in 1990 and 10.5% in 2000; while in rural areas, it increased from 2% in 1970, to 2.5% in 1980, 4% in 1990, and 4.5% in 2000. In terms of absolute numbers this translates into 30 million CHD patients in the country. The disease occurs at a much younger age in Indians as compared to those in North America and Western Europe. Rural-urban differences reveal that risk factors like obesity, truncal obesity, hypertension, high cholesterol, low HDL cholesterol and diabetes are more in urban areas. Case-control studies also confirm the importance of these risk factors. The INTERHEART-South Asia study identified that eight established coronary risk factors—abnormal lipids, smoking, hypertension, diabetes, abdominal obesity, psychosocial factors, low fruit and vegetable consumption, and lack of physical activity—accounted for 89% of the cases of acute myocardial infarction in Indians. There is epidemiological evidence that all these risk factors are increasing. Over the past fifty years prevalence of obesity, hypertension, hypercholesterolemia, and diabetes have increased significantly in urban (R2 0.45-0.74) and slowly in rural areas (R2 0.19-0.29). There is an urgent need for development and implementation of suitable primordial, primary, and secondary prevention approaches for control of this epidemic. An urgent and sincere bureaucratic, political, and social will to initiate steps in this direction is required.


0.93, p = 0.008) and metabolic syndrome (r² = 0.99, p = 0.005) with weaker trends for hypercholesterolemia (r² = 0.41, p = 0.241) and diabetes (r² = 0.79, p = 0.299) in men. In women, significant trends were observed for hypertension (r² = 0.98, p = 0.001) and weaker trends for others. Increase in generalized obesity correlated significantly with hypertension (two-line regression r², men 0.91, women 0.88), hypercholesterolemia (0.53, 0.44), metabolic syndrome (0.87, 0.94) and diabetes (0.84, 0.93). Truncal obesity correlated less strongly with the risk factors like hypertension (0.50, 0.57), hypercholesterolemia (0.88, 0.61), metabolic syndrome (0.76, 0.33), and diabetes (0.75, 0.33).

CONCLUSIONS: In Asian Indian subjects, escalating population-wide generalized obesity correlates strongly with increasing cardiovascular risk factors.

PMID: 19212018 [PubMed - indexed for MEDLINE]


Abstract

OBJECTIVE: This study was primarily carried out to assess the feasibility of an adapted WHO CVD risk management package in a primary care setting.

METHODS: A community intervention trial was conducted in eight health posts located in rural, urban, and slum areas of northern India. After a 4 day training, eight health workers implemented the package among 1010 adults > or =30 years of age from a randomly chosen cluster of households. Locally adapted scenario 1 WHO protocol was used for the assessment of CVD risks. The health workers inquired about smoking, alcohol, diet, physical activity, symptoms of angina, and transient ischaemic attacks; and measured systolic blood pressure (SBP7), height, and weight. Those with a risk were counseled and referred to a physician. Hypertensives were followed at 1, 3, and 5-month interval to reinforce risk prevention and adherence to treatment. In a 20% random sub sample, in the study and control area before and after the intervention, WHO STEPS instrument was used to evaluate effectiveness of the package.

FINDINGS: After training, the knowledge of health workers regarding risk factors and symptoms of CVDs increased from 47% to 92.5%, and their performance in detection of risks was comparable to the investigator. All health workers could pay scheduled home visits regularly. They referred 279 (27.6%) individuals having raised systolic blood pressure (SBP), and 74.5% contacted the doctor. Significant decrease in mean SBP (8.8 mm Hg) was observed during follow-up. Significantly higher reports of intention to quit tobacco (60.3% vs 25.5%) and regular intake of anti-hypertensive medication (58.3% vs 34.8%) were observed in the intervention area compared to the control area.

CONCLUSION: Adapted WHO CVD risk management package can be implemented through primary care system.

PMID:19212017[PubMed - indexed for MEDLINE]


Abstract

BACKGROUND: To determine prevalence of multiple coronary risk factors in a North Indian Punjabi community and to compare these with previous population based studies in the same city in North India we performed an epidemiological study.

METHODS: A community-based epidemiological study that focused on lifestyle determinants of obesity and its correlates in migrants from Punjab was performed at a single location in Jaipur. A house-to-house enumeration was performed to enroll all adults >or=20 years age in the locality who were then invited for participation in the study. Of the 1400 eligible subjects, 1127 participated (response rate 80.5%, men 556, women 571). Risk factor measurements included smoking or tobacco use, body-mass index (BMI), waist:hip ratio (WHR) and body fat, and in 644 (56.6%) subjects (men 340, women 304) blood examination for fasting blood glucose and lipids. Coronary risk factors were determined using pre-specified criteria.
RESULTS: There was a significant prevalence of risk factors in both men and women respectively with smoking or tobacco use in 209 (37.6%) and 12 (2.2%), obesity (BMI≥25 kg/m²) in 303 (54.5%) and 350 (61.3%), truncal obesity (high WHR) in 339 (61.0%) and 310 (54.3%), hypertension in 322 (57.9%) and 279 (48.9%), high total cholesterol≥200 mg/dl in 111 (32.6%) and 120 (39.5%), low HDL cholesterol<40 mg/dl in 103 (30.3%) and 83 (27.3%), high triglycerides≥150 mg/dl in 146 (42.9%) and 132 (43.4%), and diabetes in 88 (25.9%) and 64 (21.1%). In both men and women there was a significant age-associated escalation in obesity, central obesity, hypertension, high cholesterol and diabetes prevalence (Mantel-Haenszel chi² for trend p<0.05). Logistic regression analyses revealed that obesity and truncal obesity were major determinants of multiple risk factors such as hypertension, hypercholesterolemia, metabolic syndrome and diabetes (age-adjusted odds ratios p<0.01). Comparison with previous population-based risk factor studies from the same city in years 1995 and 2002 revealed that risk factors were significantly greater in the present group. Age-stratified differences revealed that obesity at younger age was more frequent in the present cohort.

CONCLUSIONS: There is a significant prevalence of multiple cardiovascular risk factors in this population group. Obesity is a major determinant of multiple risk factors and appears at a younger age compared to other studies in the same location.

PMID: 19126941 [PubMed - indexed for MEDLINE]


Abstract

BACKGROUND: Heart attack and stroke are problems already faced by some urban populations of India, but less is known about cardiovascular disease and risk factors in rural areas. The aim of the study was to investigate the levels and management of major cardiovascular risk factors and the prevalence of cardiovascular disease in two villages in rural Andhra Pradesh, India.

METHODS: A cross-sectional survey was done by selecting a random sample stratified by age and gender from each village using census lists compiled in 2002. For each individual, trained study staff administered a Telugu-translation of a structured questionnaire, performed a brief physical examination and collected a fasting venous blood sample. Weighted estimates of mean (or percentages with) risk factor levels in the population were calculated and are reported with confidence intervals unless otherwise specified.

RESULTS: Data was collected from 345 adults aged 20 to 90. The average household size was 4.2 and the mean combined household income was about Indian Rupees 25,454 (580 US dollars) per year. The mean systolic blood pressure was 116 (114-117) mm Hg, diastolic blood pressure 73 (114-120) mm Hg, total cholesterol 4.6 (4.5-4.7) mmol/L, HDL-cholesterol 0.8 (0.8-0.9) mmol/L, LDL-cholesterol 3.2 (3.1-3.3) mmol/L and triglyceride 1.3 (1.2-1.4) mmol/L. The prevalence of current smoking was 19.9% (15.4-24.4%), hypertension 20.3% (16.2-24.4%), diabetes 3.7% (1.8-5.5%), overweight 16.9% (12.3-21.5%) and obesity 4.4% (1.9-6.8%). A medical diagnosis of cardiovascular disease (previous heart attack, stroke or angina) was reported by 2.5% (1.1-3.9%) and a further 1.1% (0.1-2.1%) had angina by the 'Rose' classification.

CONCLUSIONS: The possibility of increasing cardiovascular risk factors and prevalence of vascular disease in areas of rural India represent a public health concern. Larger and repeated epidemiological studies focusing on chronic diseases are required to inform treatment and prevention strategies suitable for use in these areas and other resource poor settings.

PMID:16839628[PubMed - indexed for MEDLINE]


Abstract

One hundred rural Punjabi males (40-60 years old) admitted to Hero DMC Heart Institute, Ludhiana with first cardiac attack were studied to identify major determinants of cardiovascular diseases (CVD) among this group.
The results revealed that 20% and 56% of the subjects were smokers and alcohol takers, respectively. Smoking had a significant (p< or =0.01) correlation with serum LDL-C, triglycerides and systolic blood pressure. 84% had sedentary life style. 36% and 7% of the subjects were overweight and obese. The body mass index was positively and significantly (p< or =0.01) correlated with serum triglycerides. 32% and 20% of the subjects had systolic and diastolic blood pressure above normal. 22% were diagnosed for hyperglycemia. 6% suffered from hypercholesterolemia and 28% had borderline high values of serum cholesterol. 22% and 6% had high triglyceride and LDL-C levels, respectively. The study concluded that the etiology of CVD is multifactorial and no single factor is an absolute cause among the rural Punjabi male patients. Therefore, desirable modification in diet and life style can significantly reduce the risk of CVD among rural males of Punjab.

PMID:17191412[PubMed - indexed for MEDLINE]


Abstract

Death from myocardial infarction (MI) in India is exacerbated by smoking of bidis or cigarettes. Smoking among 309 men with incident MI was compared to 618 age matched controls; 56% of the individuals with MI and 26% of controls were current smokers. Current smokers had a relative risk of 4.7 (95% confidence interval (CI) 3.2 to 6.9) compared to never smokers. Relative risks for smoking more than 10 cigarettes or 10 bidis daily were 9.1 (95% CI 4.7 to 17.7) and 8.1 (95% CI 4.3 to 15.3), respectively. It is estimated that smoking may cause 53% (95% CI 47% to 64%) of MIs among urban males in India.

PMID:16183987[PubMed - indexed for MEDLINE] PMCID:PMC1748103


Abstract

BACKGROUND: The prevalence and mortality rates of coronary artery disease have been known to be higher in the Indian than the Western population. Most data on lipid levels in Indians have been obtained from studies on migrant Asian Indians. There are insufficient data on lipid profile and other conventional risk factors in Indian patients living within India.

METHODS AND RESULTS: The study included 2656 consecutive patients who underwent coronary angiography between March 1998 and February 2002. Of these, 2399 subjects had angiographically proven coronary artery disease (group 1) while 257 had normal coronary arteries (group 2). Lipid values were measured in the fasting state on the morning the coronary angiography was done. Patients receiving lipid-lowering agents, those having renal, hepatic or thyroid disorders, patients presenting within 8 weeks after acute myocardial infarction, and patients who were taking noncardiac drugs that affect the lipid profile were excluded from the study. Other conventional risk factors were also recorded. In subjects with coronary artery disease and normal coronary arteries, the levels of mean total cholesterol recorded were 178.5+/−42.1 mg/dl v. 154.1+/−40.2 mg/dl (p<0.001), high-density lipoprotein cholesterol 30.6+/−9 mg/dl v. 27.3+/−6.8 mg/dl (p<0.001), low-density lipoprotein cholesterol 109.8+/−35.4 mg/dl v 93.6+/−33.9 mg/dl (p<0.001), and triglyceride 190.7+/−95.4 mg/dl v. 157.6+/−73.5 mg/dl (p<0.001), respectively. In subgroup analysis by age, the younger coronary artery disease group (< or = 40 years) had significantly higher total and low-density lipoprotein cholesterol levels than the older group (>40 years), viz. 194.6+/−51.4 mg/dl v. 176.3+/−40.2 mg/dl (p<0.001), and 118.3+/−39.6 mg/dl v. 108.7+/−36.1 mg/dl (p=0.001). Triglyceride levels were not significantly different [211.7+/−105.1 mg/dl v. 187.8+/−93.6 mg/dl (p=ns)], being equally high in both subgroups and, although high-density lipoprotein cholesterol levels were different, this difference was minimal, being equally low in both [32.7+/−9.5 mg/dl v. 30.3+/−9.0 mg/dl (p=ns)]. In the subgroup analysis of those with coronary artery disease, diabetics had significantly lower total cholesterol [174+/−41.1 mg/dl v. 180.4+/−42.4 mg/dl (p=0.001)] and low-density lipoprotein cholesterol levels [105.8+/−34 mg/dl v. 111.5+/−35.8 mg/dl (p<0.001)] than non-diabetics, whereas triglyceride and high-density lipoprotein cholesterol levels were not significantly different, triglycerides being equally high in both [186.2+/−95.5 mg/dl v. 192.5+/−95.2 mg/dl (p=ns)], and high-density lipoprotein equally low in both [30.9+/−9.3 mg/dl v. 30.5+/−9 mg/dl (p=ns)]. The commonest associated conventional risk factor in diabetics was hypertension and, in the younger age group (< or = 40 years), it was smoking and a positive family history of premature coronary artery disease.
CONCLUSIONS: We conclude that in north Indians, coronary artery disease occurs at much lower levels of total cholesterol and low-density lipoprotein cholesterol than other populations, and high triglyceride and low high-density lipoprotein levels are more of a universal phenomenon in this population. Younger patients have a more atherogenic lipid profile than the older subgroup with coronary artery disease, and smoking and a family history of premature coronary artery disease are the most common associated risk factors. Total cholesterol levels seem to play a lesser role in the occurrence of coronary artery disease in diabetics, the presence of which is in itself overwhelming for the occurrence of coronary artery disease.

PMID:14560932 [PubMed - indexed for MEDLINE]

2.2.3. Diabetes


Abstract

BACKGROUND: Data on quit rates among diabetes patients are limited.

PURPOSE: To find whether positive change in knowledge on smoking-related complications is associated with increased quit rates among diabetes patients.

METHODS: We randomized 224 male diabetes patients into intervention groups 1 and 2. Both groups received a standard diabetic-specific smoking cessation message from a doctor. Intervention group 2 additionally received counseling. We compared the positive change in knowledge and the quit rates between the two groups at 6 months.

RESULTS: Positive change in knowledge in group 2 was two times higher than that in group 1. The odds of quitting among patients who reported a positive change in knowledge was 2.65 times higher compared to those who reported no positive change in knowledge.

CONCLUSIONS: Increasing the knowledge of persons with diabetes about the risks of developing severe complications if they continue smoking leads to significantly higher quit rates.


Abstract

OBJECTIVES: To determine the prevalence of diabetes and awareness, treatment and control of cardiovascular risk factors in population-based participants in India.

METHODS: A study was conducted in 11 cities in different regions of India using cluster sampling. Participants were evaluated for demographic, biophysical, and biochemical risk factors. 6198 participants were recruited, and in 5359 participants (86.4%, men 55%), details of diabetes (known or fasting glucose >126 mg/dL), hypertension (known or blood pressure >140/>90 mm Hg), hypercholesterolemia (cholesterol >200 mg/dL), low high-density lipoprotein (HDL) cholesterol (men <40, women <50 mg/dL), hypertriglyceridemia (>150 mg/dL), and smoking/tobacco use were available. Details of awareness, treatment, and control of hypertension and hypercholesterolemia were also obtained.

RESULTS: The age-adjusted prevalence (%) of diabetes was 15.7 (95% CI 14.8 to 16.6; men 16.7, women 14.4) and that of impaired fasting glucose was 17.8 (16.8 to 18.7; men 17.7, women 18.0). In participants with diabetes, 27.6% were undiagnosed, drug treatment was in 54.1% and control (fasting glucose ≤130 mg/dL) in 39.6%. Among participants with diabetes versus those without, prevalence of hypertension was 73.1 (67.2 to 75.0) vs 26.5 (25.2 to 27.8), hypercholesterolemia 41.4 (38.3 to 44.5) vs 14.7 (13.7 to 15.7), hypertriglyceridemia 71.0 (68.1 to 73.8) vs 30.2 (28.8 to 31.5), low HDL cholesterol 78.5 (75.9 to 80.1) vs 37.1 (35.7 to 38.5), and
smoking/smokeless tobacco use in 26.6 (23.8 to 29.4) vs 14.4 (13.4 to 15.4; p<0.001). Awareness, treatment, and control, respectively, of hypertension were 79.9%, 48.7%, and 40.7% and those of hypercholesterolemia were 61.0%, 19.1%, and 45.9%, respectively.

CONCLUSIONS: In the urban Indian middle class, more than a quarter of patients with diabetes are undiagnosed and the status of control is low. Cardiovascular risk factors-hypertension, hypercholesterolemia, low HDL cholesterol, hypertriglyceridemia, and smoking/smokeless tobacco use—are highly prevalent. There is low awareness, treatment, and control of hypertension and hypercholesterolemia in patients with diabetes.

PMID:25489485[PubMed] PMCID:PMC4256307


Abstract

BACKGROUND: In fast, developing economies such as India, the population is undergoing rapid social transition, which can increase the risk profile for diabetes. Market forces promoting lifestyles such as sedentary habits, alcohol and tobacco use, which earlier were more prevalent among affluent urban populations are now trickling into the urban poor and rural populations.

AIM: The aim of the present research was to compare the prevalence of risk factors for diabetes among three distinct social groups-the urban affluent, the urban poor and the rural poor.

SUBJECTS AND METHODS: A total of 775 adult population over 18 years and belonging to both genders were surveyed for prevalence of some of the risk factors for diabetes such as physical inactivity, obesity, alcohol, and tobacco use. The sample comprised of three distinct social groups as follows; 125 medical students representing the affluent, 400 subjects from urban slums, and 250 subjects from rural areas. Obesity was measured by body mass index (BMI) while central obesity was ascertained by waist hip ratio (WHR). Alcohol and tobacco use were elicited by interview.

RESULTS: The overall response rate was 88.52% (686/775). Medical students were more sedentary with mean hours spent each day sitting or reclining at 10.47 (3.25) h, compared to corresponding figures of 6.34 (3.1) h and 7.49 (3.74) h for the rural and urban slum residents respectively (P < 0.001). However, all types of leisure time physical activities were significantly more among the medical students compared to the other groups (P < 0.001). BMI was significantly highest among the rural population with mean of 24.22 (4.17) kg/m(2) when compared to the other groups, (P < 0.001). Villagers also had higher WHR and had a higher proportion of persons above the WHR cut-off for gender (P < 0.001). Experimentation with alcohol was more prevalent among the medical students while the urban slum residents were more frequent and heavy drinkers. Smoking was most prevalent among the medical students, while smokeless tobacco use was more among the other groups.

CONCLUSIONS: Physical inactivity, obesity, including central obesity, alcohol and tobacco use were found in various degrees in the study samples. An important finding was that both obesity and central obesity ascertained by BMI and WHR respectively were highest among the rural population implying the impact of social change on diabetic risk factors.

PMID:25506486 [PubMed] PMCID:PMC4250991


Erratum in

India

Abstract

PURPOSE: This study explored cross-country differences in the additive effects of socio-economic characteristics, health behaviors and medical comorbidities on subjective health of patients with diabetes.

METHODS: The study analyzed data from the Research on Early Life and Aging Trends and Effects (RELATE). The participants were 9,179 adults with diabetes who were sampled from 15 countries (i.e. China, Costa Rica, Puerto Rico, United States, Mexico, Argentina, Barbados, Brazil, Chile, Cuba, Uruguay, India, Ghana, South Africa, and Russia). We fitted three logistic regressions to each country. Model I only included socio-economic characteristics (i.e. age, gender, education and income). In Model II, we also included health behaviors (i.e. smoking, drinking, and exercise). Model III included medical comorbidities (i.e. hypertension, respiratory disease, heart disease, stroke, and arthritis), in addition to the previous blocks.

RESULTS: Our models suggested cross-country differences in the additive effects of socio-economic characteristics, health behaviors and comorbidities on perceived health of patients with diabetes. Comorbid heart disease was the only condition that was consistently associated with poor subjective health regardless of country.

CONCLUSION: Countries show different profiles of social and behavioral determinants of subjective health among patients with diabetes. Our study suggests that universal programs that assume that determinants of well-being are similar across different countries may be over-simplistic. Thus instead of universal programs that use one protocol for health promotion of patients in all countries, locally designed interventions should be implemented in each country.

PMID:24559091[PubMed] PMCID:PMC3984018

Incidence of cardiovascular diseases and associated risk factors among subjects with type 2 diabetes - an 11-year follow up study.


Abstract

AIMS: This study was planned to assess the development of cardiovascular disease (CVD) events over an 11-year period and to identify the associated risk factors that could predict the onset of CVD among subjects with type 2 diabetes.

METHODS: Retrospective data of 249 patients (M:F 149:100) with type 2 diabetes, from a cohort of 7800 patients, attending a tertiary care center for diabetes from January 2000 to December 2011 were retrieved and analyzed for this study. Sociodemographic and habitual risk factors, baseline diabetes duration, HbA1c and time of onset of CVD and its risk factors were collected from case records. Person-years method was used to calculate incident rate of CVD. Binary logistic regression analyses were done to identify predictors associated with CVD and its risk factors.

RESULTS: Incidence of CVD among subjects with diabetes was 5.6 cases/1000 person-years. Nearly 60% developed hypertension and dyslipidemia or both during the 11-year period. The most common complication was neuropathy (14.4%). Smoking [OR (95%CI)] [9.26 (1.6 -54.9)] (p = 0.014) and heavy alcohol consumption [8.7 (1.1-69.8)] (p = 0.04) were significantly associated with CVD. Higher BMI was significantly associated with hypertension and dyslipidemia [2.4 (1.3-4.3)] (p = 0.003).

CONCLUSIONS:

Smoking and heavy alcohol consumption were significantly associated with CVD, and increased BMI was significantly associated with hypertension and dyslipidemia among subjects with type 2 diabetes in this study population. These findings emphasize the need for early identification and modification of risk factors associated with CVD events in patients with diabetes.

PMID:24581089[PubMed - in process] PMCID:PMC3946454

Prevalence of Diabetes Mellitus among Tuberculosis Patients in Urban Puducherry.

Abstract

BACKGROUND: Diabetes and Tuberculosis often present together and complicate each other at many levels. A collaborative framework for care and control of diabetes and tuberculosis developed by World Health Organisation and International Union against Tuberculosis and Lung Diseases emphasizes routine bi-directional screening for the two diseases.

AIMS: The study was to assess the prevalence of diabetes in tuberculosis patients currently on treatment.

MATERIALS AND METHODS: This facility-based cross-sectional study was undertaken in four randomly selected peripheral health institutions providing directly observed treatment short-course, treatment for tuberculosis patients. All cases of tuberculosis, more than 18 years of age were screened for diabetes. Risk factors like age, sex, family history of diabetes, alcohol, smoking and obesity were assessed.

RESULTS: The prevalence of diabetes in tuberculosis patients was found to be 29% (known diabetics - 20.7%, new Diabetes cases - 8.3%). Diabetes was significantly associated with older age, family history of diabetes, consumption of alcohol and sputum positivity.

CONCLUSIONS: Screening patients with Tuberculosis for fasting blood sugar estimation will help in early detection of diabetes.

PMID:24678474[PubMed] PMCID:PMC3938870


Abstract

We sought to identify risk factors for type 2 diabetes (T2D) in Jammu and Kashmir populations, India. A total of 424 diabetic and 226 non-diabetic subjects from Jammu, and 161 diabetic and 100 non-diabetic subjects from Kashmir were screened for various parameters including fasting blood glucose level, 2 hour glucose level, urea, creatinine, triglycerides, total cholesterol, high-density lipoprotein cholesterol (HDL-C), low-density lipoprotein cholesterol (LDL-C), very low-density lipoprotein (VLDL-C), uric acid, systolic and diastolic blood pressure level. We found that subjects aged 40-49 years had the highest rate of diabetes, with family income playing not much of a role. Kashmiri migrants or populations with rapid cultural, environmental, social or lifestyle change along with reduced physical activity, obesity and unhealthy lifestyle (smoking and alcohol consumption) were found to have higher rates of diabetes. High blood glucose, triglycerides and low HDL-C levels were found to be contributing to disease outcome. High blood pressure also contributed to a higher risk of developing T2D. Our study supports earlier reports confirming the contribution of comfortable life style, Western dietary habits and rapid life style change along with many other factors to the prevalence of diabetes. This may contribute to the epidemic proportion of diabetes in Jammu and Kashmir. Early diagnosis and routine screening for undiagnosed diabetes in obese subjects and subjects with parental diabetes history is expected to decrease the burden of chronic diabetic complications worldwide.

PMID:24086170[PubMed] PMCID:PMC3783822


Abstract

INTRODUCTION: Elderly population contributed to 7% of total population of India in 2001 and it will rise to 9% by 2016. In 2010, 100 million people were aged above 60 years and by 2020 it will be 177 million. Ageing process is as such complex and multi-factorial. Chronic morbidities like diabetes and hypertension are becoming common health problems among the geriatric population.

AIM: To assess the prevalence of diabetes and hypertension among geriatric population in a rural community of Tamilnadu.
India

MATERIALS AND METHODS: A cross-sectional study was conducted on 400 geriatric population at Attayampatti village, rural community in Salem district by using a pre-tested, semi-structured questionnaire. House to house visit was done on simple random basis. Their height and weight was measured and body mass index was calculated. The diabetic status was confirmed by using random blood sugar estimation and hypertension was assessed by using a standard sphygmomanometer apparatus.

RESULTS: The overall prevalence of diabetes among study population was 36% and the prevalence of hypertension was 59%. Among diabetes, the prevalence in males was 22% and in females it was 15%. Among hypertensives, the prevalence in males was 33.3% and in females it was 26.2%. Their mean BP was 140/100 and the mean random blood sugar was 180 mgs/dl. Factors like age, BMI and smoking showed statistical significant association towards diabetes and hypertension.

CONCLUSION: Early identification of chronic geriatric morbidities like diabetes and hypertension should be ensured through periodic screening and regular health checkups.

PMID:24326765[PubMed - indexed for MEDLINE]


Abstract

BACKGROUND: India has the second largest diabetic population (61 million) and tobacco users (275 million) in the world. Data on smoking cessation among diabetic patients are limited in low and middle income countries. The objective of the study was to document the effectiveness of diabetic specific smoking cessation counseling by a non-doctor health professional in addition to a cessation advice to quit, delivered by doctors.

METHODS: In our parallel-group randomized controlled trial, we selected 224 adult diabetes patients aged 18 years or older who smoked in the last month, from two diabetes clinics in South India. Using a computer generated random sequence with block size four; the patients were randomized equally into intervention-1 and intervention-2 groups. Patients in both groups were asked and advised to quit smoking by a doctor and distributed diabetes specific education materials. The intervention-2 group received an additional diabetes specific 30 minutes counseling session using the 5As (Ask, Advise, Assess, Assist and Arrange), and 5 Rs (Relevance, Risks, Rewards, Roadblocks and Repetition) from a non-doctor health professional. Follow up data were available for 87.5% of patients at six months. The Quit Tobacco International Project is supported by a grant from the Fogarty International Centre of the US National Institutes of Health (RO1TW005969-01). The primary outcomes were quit rate (seven day smoking abstinence) and harm reduction (reduction of the number of cigarettes / bids smoked per day > 50% of baseline use) at six months.

RESULTS: In the intention to treat analysis, the odds for quitting was 8.4 [95% confidence interval (CI): 4.1-17.1] for intervention-2 group compared to intervention-1 group. Even among high level smokers the odds of quitting was similar. The odds of harm reduction was 1.9 (CI: 0.8-4.1) for intervention-2 group compared to intervention-1 group.

CONCLUSIONS: The value addition of culturally sensitive diabetic specific cessation counseling sessions delivered by non-doctor health professional was an impressive and efficacious way of preventing smoking related diabetic complications.

TRIAL REGISTRATION: Clinical Trial Registry of India (CTRI/2012/01/002327).

PMID: 23331722 [PubMed - indexed for MEDLINE] PMCID: PMC3560246

Abstract

BACKGROUND: Diabetes mellitus (DM) is recognised as an important risk factor to tuberculosis (TB). India has high TB burden, along with rising DM prevalence. There are inadequate data on prevalence of DM and pre-diabetes among TB cases in India. Aim was to determine diabetes prevalence among a cohort of TB cases registered under Revised National Tuberculosis Control Program in selected TB units in Tamil Nadu, India, and assess pattern of diabetes management amongst known cases.

METHODS: 827 among the eligible patients (n=904) underwent HbA1c and anthropometric measurements. OGTT was done for patients without previous history of DM and diagnosis was based on WHO criteria. Details of current treatment regimen of TB and DM and DM complications, if any, were recorded. A pretested questionnaire was used to collect information on sociodemographics, habitual risk factors, and type of TB.

FINDINGS: DM prevalence was 25.3% (95% CI 22.6 -28.5) and that of pre-diabetes 24.5% (95% CI 20.4 -27.6). Risk factors associated with DM among TB patients were age (31-35, 36-40, 41-45, 46-50, >50 years vs <30 years) [OR (95% CI) 6.75 (2.36 -19.3); 10.46 (3.95 -27.7); 18.63 (6.58 -52.7); 11.05 (4.31-28.4); 24.7 (9.73-62.7) (p<0.001)], positive family history of DM [3.08 (1.73 -5.5) (p<0.001)], sedentary occupation [1.69 (1.10 -2.59) (p=0.016)], and BMI (18.5-22.9, 23-24.9 and ≥25 kg/m(2) vs <18.5 kg/m(2)) [2.03 (1.32-3.12) (p=0.001); 0.87 (0.31-2.43) (p=0.78); 1.44 (0.54-3.8) (p=0.47)]; for pre-diabetes, risk factors were age (36-40, 41-45, 46-50, >50 years vs <30 years) [2.24 (1.1 -4.55) (p=0.026); 6.96 (3.3-14.7); 3.44 (1.83-6.48); 4.3 (2.25-8.2) (p<0.001)], waist circumference [<90 vs. ≥90 cm (men), <80 vs. ≥80 cm (women)] [3.05 (1.35-6.9) (p=0.007)], smoking [1.92 (1.12-3.28) (p=0.017)] and monthly income (5000-10,000 INR vs <5000 INR) [0.59 (0.37-0.94) (p=0.026)]. DM risk was higher among pulmonary TB [3.06 (1.69-5.52) (p<0.001)], especially sputum positive, than non-pulmonary TB.

INTERPRETATION: Nearly 50% of TB patients had either diabetes or pre-diabetes.

PMID:22848473[PubMed - indexed for MEDLINE] PMCID:PMC3406054


Abstract

Diabetic nephropathy is associated with high morbidity and mortality and the prevalence of this disease is continuously increasing worldwide. Long-term diabetes increases the likelihood of developing secondary complications like nephropathy, the most common cause of end stage renal disease. Usually, other factors like hypertension, alcoholism and smoking also partly contribute to the progression of diabetic nephropathy. Among this, cigarette smoking in diabetes has been repeatedly confirmed as an independent risk factor for the onset and progression of diabetic nephropathy. Various studies suggest that smoking is a major fuel in the development of high oxidative stress and subsequently hyperlipidemia, accumulation of advanced glycation end products, activation of the renin angiotensin system and Rho-kinase, which are observed to play a pathogenic role in the progression of diabetic nephropathy. Furthermore, cigarette smoking in diabetic patients with vascular complications produces a variety of pathological changes in the kidney, such as thickening of the glomerular basement membrane and mesangial expansion with progression in glomerulosclerosis and interstitial fibrosis, which ultimately results in end stage renal failure. Strong associations are consistently found between chronic cigarette smoking and diabetic microvascular complications. A diverse group of studies unveil potential mechanisms that may explain the role of cigarette smoking in the progression of diabetic nephropathy. Tremendous efforts are being made to control smoking mediated progression of diabetic nephropathy, but no promising therapy is yet available. The present review critically discusses the possible detrimental role of chronic cigarette smoking in the progression of diabetic nephropathy and various possible pharmacological interventions to attenuate the exacerbation of diabetic nephropathy.

PMID:23301120[PubMed] PMCID:PMC3538984


Abstract
BACKGROUND: The magnitude of diabetic foot ulcers (DFUs) and the amputation rates due to DFUs remain high even in developing and developed countries. Yet, the influence of knowledge, attitude, and practice (KAP) of diabetic foot care (DFC) on DFU incidence is not studied much.

OBJECTIVE: To study causal relationship between knowledge, attitude and practice (KAP) on DFC between diabetic patients with and without DFUs; and the risk factors associated with DFUs.

METHODS: A consecutive of 203 diabetic patients (103 with DFU and 100 without DFU) were included in the study. Their demographic details, medical history, and personal habits were recorded. KAP on DFC was assessed using a questionnaire. Responses were recorded, scored, and analyzed.

RESULTS: Of the cohort, 67.5% were males, mean age: 59.9 ± 11.4 years. Patients without DFU had good knowledge on DFC compared to those with DFU (86% versus 69.9%) (p<0.001). Incidence of DFU was 9% and 39.8% (p<0.001) among patients who practiced and not practiced DFC respectively. 88% patients with and without DFUs; showed favorable attitude toward adopting DFC. Risk factors - diabetic peripheral neuropathy, peripheral vascular disease, retinopathy, nephropathy, smoking, tobacco chewing and alcohol consumption were significantly (p<0.001) associated with DFUs.

CONCLUSIONS: An inverse relationship between DFU and foot care knowledge as well as practice was observed. Apart from tight glycemic control, diabetic patients must be educated and motivated on proper foot care practice and life style modifications for preventing DFUs.

PMID:22999359[PubMed - indexed for MEDLINE]


Abstract

BACKGROUND: India has the largest number of patients with diabetes in the world, accounting for more than 50 million subjects. There are limited studies on diabetes awareness, attitude, and prevalence in rural communities, especially in the northeastern part of India.

MATERIALS AND METHODS: A community-based survey using the STEPS questionnaire with recording of blood pressure, fasting blood glucose, postprandial blood glucose, waist circumference, and height was conducted among the residents of Kameng district of Arunachal Pradesh. A door-to-door survey was conducted in each village, and members above the age of 25 years from each household were considered eligible to participate.

RESULTS AND CONCLUSION: The awareness of diabetes in the study population was found to be as low as 21%. Majority of subjects (58%) had a normal BMI and adequate physical activity (88%). The prevalence of smoking (72%) and alcohol consumption (49%) was found to be very high amongst the study population. Blood glucose screening revealed that 13% had impaired fasting glucose and 6% had impaired glucose tolerance.

PMID:22701853[PubMed] PMCID:PMC3354948


Abstract

BACKGROUND: The occurrence of diabetes has greatly increased in low- and middle-income countries, particularly in Asia, as has the prevalence of overweight and obesity; in European-derived populations, overweight and obesity are established causes of diabetes. The shape of the association of overweight and obesity with diabetes risk and its overall impact have not been adequately studied in Asia.
METHODS AND FINDINGS: A pooled cross-sectional analysis was conducted to evaluate the association between baseline body mass index (BMI, measured as weight in kg divided by the square of height in m) and self-reported diabetes status in over 900,000 individuals recruited in 18 cohorts from Bangladesh, China, India, Japan, Korea, Singapore and Taiwan. Logistic regression models were fitted to calculate cohort-specific odds ratios (OR) of diabetes for categories of increasing BMI, after adjustment for potential confounding factors. OR were pooled across cohorts using a random-effects meta-analysis. The sex- and age-adjusted prevalence of diabetes was 4.3% in the overall population, ranging from 0.5% to 8.2% across participating cohorts. Using the category (22.5-24.9 kg/m²) as reference, the OR for diabetes spanned from 0.58 (95% confidence interval [CI] 0.31, 0.76) for BMI lower than 15.0 kg/m² to 2.23 (95% CI 1.86, 2.67) for BMI higher than 34.9 kg/m². The positive association between BMI and diabetes prevalence was present in all cohorts and in all subgroups of the study population, although the association was stronger in individuals below age 50 at baseline (p-value of interaction<0.001), in cohorts from India and Bangladesh (p<0.001), in individuals with low education (p-value 0.02), and in smokers (p-value 0.03); no differences were observed by gender, urban residence, or alcohol drinking.

CONCLUSIONS: This study estimated the shape and the strength of the association between BMI and prevalence of diabetes in Asian populations and identified patterns of the association by age, country, and other risk factors for diabetes.

PMID: 21731609 [PubMed - indexed for MEDLINE] PMCID: PMC3120751


Abstract

With growing urbanization and economic development, there is a rapid increase in the incidence of type 2 diabetes mellitus (T2DM) in India. T2DM is associated with 2-4 times higher risk for cardiovascular disease (CVD), including coronary artery disease, stroke and peripheral vascular disease. Several studies have shown the benefit of intensive glycaemic control in reducing the frequency of diabetic microvascular complications such as retinopathy and nephropathy. Results of long term follow up of patients with diabetes, who were enrolled in earlier trials, have shown that initial intensive glycaemic control led to a reduction in CVD outcomes when compared with standard therapy. However, it is unclear if intensive glycaemic control, aiming to reduce haemoglobin A1c to levels even lower than the current goal of <7%, will similarly lead to reduction in the rates of CVD. Recently, the results of 3 large, randomized controlled trials have been published, which suggest that in established T2DM with previous CVD or high risk of CVD, the benefits of intensive glycaemic control when compared with conventional good control, are minimal with regards to reduction of cardiovascular outcomes. Intensive therapy increases the risk of side-effects such as severe hypoglycaemia and weight gain. The implementation of such a therapy, with rigorous attention to frequent monitoring of blood glucose and visits to the physician, is not likely to be possible on a large scale, especially in a developing country such as India. The aim of management of patients with established T2DM should be to achieve the goal of good glycaemic control (haemoglobin A1c<7%), with avoidance of hypoglycaemia. It is equally, if not more important, to control other risk factors of CVD by paying greater attention to lifestyle measures (weight loss if overweight or obese, regular exercise, cessation of smoking), rigorous control of blood pressure (<130/80 mmHg) and low density lipoprotein (LDL) cholesterol (<100 mg/dl or <70 mg/dl if already diagnosed with CVD) and the prophylactic use of low dose aspirin as per current recommendations. A multifactorial approach targeting multiple cardiovascular risk factors is likely to be most effective in reducing CVD outcomes in T2DM.

PMID:21608354[PubMed - indexed for MEDLINE]


Abstract

BACKGROUND: We aimed to estimate the prevalence of diabetes mellitus and study the associated factors in a rural population in Goa, India.
METHODS: A cross-sectional study was done in the rural area of Mandur, Goa. Participants>20 years of age were selected by systematic random sampling. They were interviewed with the help of a structured, pretested questionnaire. This was followed by clinical examination, anthropometry and relevant laboratory investigations. Diabetes mellitus was defined as per the American Diabetes Association (ADA) criteria. Statistical analysis was done using the SPSS software package (version 14.0).

RESULTS: The prevalence of diabetes mellitus in the study population was 10.3% (130/1266) with a prevalence of 8.4% among men and 12% among women. On bivariate analysis, the prevalence of diabetes mellitus was found to be significantly associated with age, occupation, family income, family history of diabetes, smoking, obesity, hypertension, and high serum cholesterol and triglycerides levels. Multiple logistic regression analysis identified age, family history, hypertension, smoking, total cholesterol and triglyceride as the independently associated variables for diabetes mellitus.

CONCLUSION: Innovative community outreach programmes are required to create awareness, and for screening and treatment of diabetes mellitus to curb the growing epidemic of diabetes in the population.

PMID:21608352[PubMed - indexed for MEDLINE]

2.2.4. Respiratory diseases


Abstract

OBJECTIVE: Given the wide variations in prevalence of chronic obstructive pulmonary disease observed between populations with similar levels of exposure to tobacco smoke, we aimed to investigate the possibility of variations in prevalence of chronic bronchitis (CB) between two geographically distinct smoking populations in rural Karnataka, India.

DESIGN: The Burden of Obstructive Lung Disease (BOLD) questionnaire was administered to all men aged >30 years in a cross-sectional survey. The χ(2) and Fisher's exact tests were used to compare CB prevalence in the two populations. Logistic regression was used to analyse the impact of multiple variables on the occurrence of CB.

RESULTS: Two samples of 2322 and 2182 subjects were included in the study. In non-smokers, CB prevalence did not differ between the populations. However, it was significantly different between smoking populations (44.79% vs. 2.13%, P < 0.0001). Logistic regression indicated that, in addition to smoking, region, age, occupational dust exposure and type of house were associated with higher likelihood of CB. An interaction between smoking and area of residence was found (P < 0.001) and appeared to explain the effect of region (without interaction).

CONCLUSION: A significant difference in CB prevalence was observed between male populations from two areas of Karnataka state, including when stratified by smoking status. No significant difference was observed between non-smokers.

Comment in

- Chronic bronchitis: so much more than just a smoker's cough. [Int J Tuberc Lung Dis. 2014]

PMID:24902567[PubMed - in process]


Abstract
BACKGROUND AND OBJECTIVE: Oxidative stress resulting from tobacco smoking has been suggested to play a role in the pathogenesis of chronic obstructive pulmonary disease (COPD). The aim of the present study was to evaluate the oxidant and antioxidant levels in smokers with and without COPD.

METHODS: Two hundred thirty-six patients with COPD and 150 smokers with no respiratory problems were selected. COPD diagnosis and staging was done based on the Global Initiative for Chronic Obstructive Lung Disease criteria. Plasma malondialdehyde (MDA) and erythrocyte glutathione (GSH) concentrations and superoxide dismutase (SOD), catalase (CAT), glutathione peroxidase (GPx) and glutathione-s-transferase (GST) activities were assessed.

RESULTS: COPD patients had higher levels of MDA and lower levels of antioxidants when compared with controls (P < 0.01). Analysis of variance revealed increase in MDA (P < 0.05) and decrease in CAT activity (P < 0.01) and GSH (P < 0.05) level with the progression of the disease. In patients, lung function positively correlated with CAT and SOD activities and negatively correlated with MDA levels (P < 0.01). Smoking history showed negative relation with forced expiratory volume in 1 s (FEV1)/forced vital capacity (P < 0.05) and positive correlation with CAT activity (P < 0.01). MDA levels negatively correlated with SOD (r = -0.239; P < 0.01). In controls, MDA levels showed significant positive correlation with FEV1 and GPx (P < 0.05) and negative correlation with GSH (P < 0.01). Logistic regression showed association of higher MDA levels with increased risk and higher levels of CAT and GSH with decreased risk of progressing in the disease (odds ratio = 2.938, 2.538, 7.860).

CONCLUSIONS: Our study demonstrates that there is an oxidant antioxidant imbalance in COPD patients and suggests the importance of GPx in maintaining lung function.

PMID: 23683270 [PubMed - indexed for MEDLINE]


Abstract

BACKGROUND: Tobacco smoking in India has been increasing alarmingly. Smoking is a known risk factor for chronic obstructive pulmonary disease (COPD), cardiovascular diseases and certain cancers, especially, the lung cancer. The percentage prevalence of cigarette smoking (18.5%) and cigar smoking (4%) in males is high in Andhra Pradesh compared to other southern states. There is not enough scientific literature to correlate about intensity of cigarette and cigar smoking and their impact on lung function though high prevalence is reported in Andhra Pradesh, India.

OBJECTIVES: The purpose of this study was to examine whether PEFR differs between cigarette and cigar smokers compared to non-smokers and also to estimate the intensity of cigarette and cigar smoking on PEFR.

METHODS: PEFR was recorded in cigarette smokers (n=49) and cigar smokers (n=10) as well as in non-smokers (n=64) using Wright's mini Peak Flow Meter.

RESULTS: PEFR is decreased in both cigarette as well in cigar smokers compared to non-smokers and the magnitude of decline was higher in cigar smoking elderly individuals.

CONCLUSION: The intensity of cigarette and cigar smoking (pack-years) emerged as the main variable to influence airway obstruction in smokers that caused greater reduction in PEFR.

PMID:24179889[PubMed] PMCID:PMC3809628


Abstract
BACKGROUND: COPD is a major global health problem affecting 4-10% of Indian adult male population. Immunological processes have been implicated in the pathogenesis of COPD. As compared to healthy smokers, COPD patients have airway inflammation indicated by the presence of CD8+ T cells in the lung. This predominant increase in CD8+ T cells in the lung may be reflected in the peripheral blood. In an attempt to understand why only some smokers develop COPD, we compared the peripheral T-cell markers in COPD patients with that of asymptomatic smokers, and healthy nonsmokers.

METHODS: Twenty healthy non-smokers (HNS), 19 asymptomatic smokers (AS) and 21 COPD male patients (age and pack year-matched) were identified after clinical evaluation and spirometry. Blood CD3+, CD4+, CD8+ T-cell populations were measured.

RESULTS: Smokers with COPD had severe airflow limitation (FVC, 69.8±16.7%; FEV1, 47.47±16.9%; FEV1/FVC, 53.1±13.3%). The BMI was found to be significantly lower among patients with COPD (19.1±4.8kg/m2) as compared to AS (23±4.3kg/m2) and HNS (23.7±4.0kg/m2) (p value = 0.003 HS). The mean CD3+ T-cell absolute count in COPD patients (1154.3±582.2), showed a marked decline as compared to that of AS (1251.9±491.6) and HNS (1424.9±352.2). The mean CD4+ T-cell counts in COPD patients (652.7±340.5) were also lower when compared to AS (745.7±313.8) and HNS (832.5±220.7). The mean CD8+ T-cell counts among COPD patients (424.7±264.3) were, similar to the counts observed among AS (426.9±193.2) and HNS (500.4±191). Though not statistically significant, the absolute counts of CD3+, CD4+ and CD8+ lymphocytes among COPD patients tended to be lower. No significant difference in the CD4+/CD8+ lymphocyte ratio between the patient groups was observed.

CONCLUSION: Our study indicates that BMI is related to the severity of COPD, hence proving a systemic component to its pathogenesis. However, we found similar percentages of CD8+ T cells in all the study groups suggesting that predominant CD8+ T cells in the airways may be due to its de novo origin rather than recruitment from blood. However, larger studies are needed to clarify the effect of disease severity, beedi smoking and ethnicity.

PMID:23905115 [PubMed] PMCID:PMC3708210


Abstract

Non communicable diseases in most of the developing countries have surpassed the morbidity and mortality arising from communicable diseases. However there are people who continue to suffer from the residual disabilities of some communicable disease acquired at younger age like polio and develop non communicable diseases like COPD and coronary syndrome at older age primarily because of their tobacco habits. Both of these combination of communicable and non communicable diseases are preventable if timely preventive measures and healthy life style is adopted. This highlights one such case where patient despite suffering from polio and restrictive lung disease started using tobacco and suffered from obstructive lung disease and coronary syndrome.

PMID:23897524 [PubMed - indexed for MEDLINE]


Abstract

BACKGROUND: Exposure to environmental tobacco smoke (ETS) is a risk factor for childhood asthma. Its association with asthma in adults is less clear.

METHODS: In a multicentric population study on asthma prevalence in adults, specific enquiries were made into childhood and adulthood exposure to household ETS, and its relationship with asthma diagnosis were analysed.
RESULTS: From a total of 73605 respondents, 62109 were studied after excluding current or past smokers. Overall observed prevalence of asthma was 2.0% (men 1.5%, women 2.5%, p < 0.001). Of all asthma patients, history of ETS exposure was available in 48.6 percent. Prevalence of asthma in the ETS exposed subjects was higher compared to non-exposed individuals (2.2% vs 1.9%, p < 0.05). Multiple logistic regression analysis showed a higher risk of having asthma in persons who were exposed to ETS compared to those not exposed (odds ratio [OR] 1.22, 95% CI 1.08-1.38) after adjusting for age, gender, usual residence, exposure to biomass fuels and atopy. Stratification of ETS exposure revealed that exposure during childhood and both during childhood and adulthood were significantly associated with asthma prevalence. Exposure only in adulthood was not a significant risk factor (OR 1.13, 95% CI 0.95-1.33). Persons reporting combined environmental tobacco smoke exposure from parents during childhood and spouse during adulthood had highest risk of having asthma (OR 1.69, 95% CI 1.38-2.07). Environmental tobacco smoke exposure was also significantly associated with prevalence of respiratory symptoms such as wheezing, cough and breathlessness.

CONCLUSIONS: Environmental tobacco smoke exposure during childhood is an important risk factor for asthma and respiratory symptoms in non-smoking adults.

PMID:16482949[PubMed - indexed for MEDLINE]


Abstract

BACKGROUND: Population prevalence of tobacco smoking especially with reference to detailed habits such as the amount smoked, the smoking forms, quit-rates and relationship with demographic variables were studied at four different centres in India along with the study on epidemiology of asthma and chronic obstructive pulmonary disease.

METHODS: The study population included adults of over 15 years of age selected with two-stage stratified random sample design. A specifically designed questionnaire was used for the study.

RESULTS: There were 11496 (15.6%) ever smokers in the study sample of 73605 subjects. Among 37682 males, 10756 (28.5%) were ever smokers and among 35923 females, 740 (2.1%) were ever smokers. Bidi was the commonest form of smoking, more so in the rural areas. The mean number of cigarettes/bidis smoked per day was 14 (+/- 11.5) and the mean age of starting smoking was 20.5 (+/- 20.0) years. Increasing age, low socio-economic status and rural residence were important factors associated with smoking. Vigorous anti-tobacco measures under the tobacco control programmes yielded only a quit-rate of 10 percent. Nearly 14% of ever smokers had some respiratory symptoms.

CONCLUSIONS: A substantial proportion of population in India has current or past smoking habit with higher prevalence among males than females. The quit-rates have been low in spite of the various anti-tobacco measures. There is a significant respiratory morbidity associated with smoking.

PMID:16482950[PubMed - indexed for MEDLINE]


Abstract

INTRODUCTION: Population prevalence of chronic obstructive pulmonary disease (COPD) and its relationship with tobacco smoking, environmental tobacco smoke (ETS) exposure and other variables were studied in adult subjects of 35 years and above at four different centres in India. Question-items for the diagnosis of COPD were included in the questionnaire used for the field study on asthma epidemiology.

METHODS: Field surveys were conducted in both the urban and the rural populations at Bangalore, Chandigarh, Delhi and Kanpur with the help of a structured and validated questionnaire for diagnosis of asthma and COPD. Separate sets of questions were used for the diagnoses of the two diseases. A two-stage stratified sample design was employed where a village or an urban locality formed the first stage unit and a household formed the second stage unit. A uniform methodology was used at all the four centres and the analyses were done at the central
coordinating centre—Chandigarh. Chronic obstructive pulmonary disease, defined by chronic bronchitis (CB) criteria, was diagnosed from the presence of cough and expectoration on most of the days for at least three months in a year for two consecutive years or more.

RESULTS: Chronic obstructive pulmonary disease was diagnosed in 4.1% of 35295 subjects, with a male to female ratio of 1.56:1 and a smoker to nonsmoker ratio of 2.65: 1. Prevalence among bidi and cigarette smokers was 8.2% and 5.9%, respectively. Odds ratio (OR) for COPD was higher for men, elderly individuals, lower socio-economic status and urban (or mixed) residence. Environmental tobacco smoke exposure among nonsmokers had an OR of 1.4(95% CI 1.21-1.61). Combined exposure to both ETS and solid fuel combustion had higher OR than for ETS exposure alone.

CONCLUSIONS: Population prevalence of COPD is very high in India with some centre to centre differences. Smoking of both bids and cigarettes, and ETS exposure among nonsmokers, were two important risk factors at all centres. It is important to employ uniform methodology for assessment of national burden and disease-surveillance programme.

PMID:16482948[PubMed - indexed for MEDLINE]

2.2.5. Other diseases


Abstract

Tobacco consumption is the leading preventable cause of disease, disability, and premature death but little is known about its deleterious effect on the ocular health of workers handling tobacco. The goal of this study was to identify probable effects of occupational tobacco exposure among South Indian bidi-industry workers. This study included 310 females (mean age, 34.8 +/- 10.9 years) actively involved in bidi-rolling presenting with eye symptoms to a tertiary eye care hospital. Results suggested that a wide spectrum of ocular complications exist among these workers. Common ocular symptoms were defective vision, dull-aching headache and eye irritation. The main ocular findings were papillary conjunctival hyperplasia, hyperpigmentation of ocular surface, punctate epithelial erosion or superficial punctate keratitis, cataract or pseudophakia and segmental optic atrophy. Abstaining from work, supplementation of Vitamin B complex rich in B 12 and appropriate surgical or medical management reversed visual loss due to corneal disease or cataract but was not effective in optic neuropathy.

PMID:18579993[PubMed - indexed for MEDLINE] PMCID:PMC2636170


Abstract

There is a dearth of literature regarding the pregnancy outcomes in antenatal women using smokeless tobacco products (STP). Objective: To compare maternal and neonatal pregnancy outcomes in antenatal women using smokeless tobacco products with those not using tobacco products. Method: Pregnant women attending antenatal clinic at Guru Teg Bahadur hospital, Delhi received brief information about smokeless tobacco products. Antenatal women using STP and matched controls, 92 in each group (total 184) were recruited for the study. After obtaining consent, the urinary cotinine level was measured in both groups at first contact. Antenatal, labour and postpartum events were recorded in both groups. Urinary cotinine levels were again measured at 6 months in the user group. Results: Average age of antenatal women under study was 24.8 yrs and 25.21 yrs in user and non-user groups respectively. More women in the user group were illiterate (P < 0.05). Mean urinary cotinine in user and non-users was 44.21 +/- 20.39 μg/ml and 24.37 +/- 20.14 μg/ml respectively (p < 0.0001). Women using STPs for more than 5 yrs recorded higher urinary cotinine levels. There was no significant difference in urinary cotinine levels with the type of tobacco product consumed. Pregnancy outcomes of 39 women are known. There was no significant difference in antenatal, intra-natal and postpartum complications in the two groups. Neonatal weight difference was 20 gms. Conclusion: Smokeless tobacco products are the most common forms used by women in low and middle income countries. Larger studies are required to understand their effects on pregnancy outcomes.

Abstract

Tobacco smoking has been found to be a major environmental factor associated with generalized forms of severe periodontitis. Altered serum and gingival crevicular fluid inflammatory cytokine profiles, immune cell function, and altered proteolytic regulations are noticed in smokers. These observations are not consistent, and to date, there has been no clear mechanism to explain how smoking may affect periodontal disease. Hence, the present study was undertaken to assess the impact of smoking on serum immunoglobulin G (IgG) levels in smokers with periodontitis and its potential role as a risk indicator of the disease process. 40 subjects (15 smokers and 15 non-smokers with chronic periodontitis, 10 healthy controls) were included in the study. Smoking history was assessed according to a standardized interview and a questionnaire, Fagerstrom Test for Nicotine Dependence. Serum immunoglobulin IgG was estimated with immunoturbidimetric assay. IgG levels were significantly decreased with longer duration of smoking. In addition levels of serum IgG were significantly lower in smokers compared to non-smokers with chronic periodontitis and healthy controls (P < 0.001). Current observations indicate that cigarette smoking may be associated with the suppression of B-cell function and immunoglobulin production. The alteration of antibody levels further explains the potential mechanism by which smoking exacerbates periodontal disease. Further studies at the molecular level may highlight the specific mechanism by which tobacco can interact with cells of the immune system and its impact on periodontal disease process. Additional controlled, longitudinal studies may expound the significance of serum anti-bodies as potential markers for periodontal disease.


Abstract

Areca nut is widely consumed by all age groups in many parts of the world, especially south-east Asia. The objective of this review is to systematically review and collate all the published data that are related to the systemic effects of areca nut. The literature search was performed by an electronic search of the Pubmed and Cochrane databases using keywords and included articles published till October 2012. We selected studies that covered the effect of areca nut on metabolism, and a total of 62 studies met the criteria. There is substantial evidence for carcinogenicity of areca nut in cancers of the mouth and esophagus. Areca nut affects almost all organs of the human body, including the brain, heart, lungs, gastrointestinal tract and reproductive organs. It causes or aggravates pre-existing conditions such as neuronal injury, myocardial infarction, cardiac arrhythmias, hepatotoxicity, asthma, central obesity, type II diabetes, hyperlipidemia, metabolic syndrome, etc. Areca nut affects the endocrine system, leading to hypothyroidism, prostate hyperplasia and infertility. It affects the immune system leading to suppression of T-cell activity and decreased release of cytokines. It has harmful effects on the fetus when used during pregnancy. Thus, areca nut is not a harmless substance as often perceived and proclaimed by the manufacturers of areca nut products such as Pan Masala, Supari Mix, Betel quid, etc. There is an urgent need to recognize areca nut as a harmful food substance by the policy makers and prohibit its glamorization as a mouth freshener. Strict laws are necessary to regulate the production of commercial preparations of areca nut.

PMID: 25006276 [PubMed] PMCID: PMC4080659


Abstract

A cross-sectional study was designed to assess the prevalence of periodontal diseases among tobacco and non-tobacco users. A total of 2,156 dentate subjects were selected in the age group of 35-44 years through multi-stage sampling method. A total of 350 and 175 subjects were selected from household survey from each district in rural and urban areas. Subjects were interviewed for the tobacco usage status, followed by clinical assessment of periodontal status. Prevalence of calculus, periodontal pockets of 4-5 mm depth and loss of attachment of 0-3 mm and 4-5 mm was significantly more frequent among current tobacco users. The subject with smoking and
An annotated bibliography of scientific studies done on tobacco topic in WHO South-East Asia Region countries

chewing tobacco has an odds ratio (OR) 1.6 (95% confidence intervals [CI] 1.14-2.31) and OR 1.7 (95% CI 1.38-2.28) respectively. The findings contribute to the evidence of smoking as a risk factor for periodontal disease.

PMID: 23873199 [PubMed - indexed for MEDLINE]


Abstract

India has a long history of tobacco, which includes chewing tobacco and smoking tobacco in various forms. Initially, the smokeless tobacco chewing habit was seen among the majority of the farmers who cultivated tobacco; but in recent years, smokeless tobacco is available in many forms and is cheaper as well and hence it is widely being used among literate and illiterate people. The subjects of our study are living in hilly regions of Yercaud in Salem district, South India. Most of the inhabitants of our study area are illiterate and more particularly they are unaware of the health effects due to tobacco use. Recent epidemiological reports have strongly indicated the association of cancer risk with usage of smokeless tobacco. The prime aim of our study is to evaluate the genotoxic effects of tobacco use by analysing the cytogenetic end points such as chromosome aberrations in peripheral blood and micronucleus in peripheral blood and buccal cells. About 85 smokeless tobacco users were enrolled for the study and same numbers of age- and sex-matched nontobacco users were also enrolled to serve as controls. The result of our study revealed that tobacco users displayed varied levels of elevated chromosomal damage and micronucleated cells than nontobacco users. The variation in the extent of genetic damage was dependent on the duration of the tobacco use. In conclusion, this study might be helpful in creating awareness on the hazards of the smokeless tobacco products among the global population as a whole for those who chose such products as a cheap alternative to tobacco smoke.

PMID: 22317826 [PubMed - indexed for MEDLINE]


Abstract

Although cigarette smoking remains the most prevalent form of tobacco use in girls and in women of reproductive age globally, use of non-cigarette forms of tobacco is prevalent or gaining in popularity in many parts of the world, especially in low- and middle-income countries. Sparse but growing evidence suggests that the use of some non-cigarette tobacco products during pregnancy increases the risk of adverse pregnancy outcomes. In this paper we review the literature on the prevalence of non-cigarette tobacco product use in pregnant women and in women of reproductive age in high-, middle-, and low-income countries and the evidence that maternal use of these products during pregnancy has adverse health effects. In addition, we communicate findings from an international group of perinatal and tobacco experts that was convened to establish research priorities concerning the use of non-cigarette tobacco products during pregnancy. The working group concluded that attempts to develop a public health response to non-cigarette tobacco use in women are hindered by a lack of data on the epidemiology of use in many parts of the world and by our limited understanding of the type and magnitude of the health effects of these products. We highlight research gaps and provide recommendations for a global research agenda.

PMID: 20225987 [PubMed - indexed for MEDLINE]


Abstract

OBJECTIVES: To compare the gingival crevicular fluid (GCF) myeloperoxidase (GM) levels in smokers and non-smokers.
MATERIALS AND METHODS: This study comprised 45 subjects: (a) 12 smokers with periodontitis, (b) 10 non-smokers with periodontitis, (c) 11 smokers with healthy periodontium, and (d) 12 non-smokers with healthy periodontium were recruited for the study and their GM levels were analyzed.

RESULTS AND CONCLUSION: GM levels were significantly higher in smokers with periodontitis compared with others. Hence, more incidence of mutagenesis and cytotoxicity were noted at sites of inflammation mediated by GM in smokers compared with non-smokers.

PMID:20427901[PubMed - indexed for MEDLINE]


Abstract

OBJECTIVE: To investigate pregnancy outcomes among women living with smokers.

DESIGN: Data were from a cohort study of 1,217 women recruited during 3-7th month of pregnancy and 96% followed-up after delivery. The main objective was to investigate effects of smokeless tobacco on pregnancy outcomes.

SETTING: Lower and middle-class neighborhoods in Mumbai, India. Community health volunteers who had good rapport with the local population collaborated with the study personnel to help locate and interact with potential participants.

POPULATION: Singleton births from non-tobacco users; n = 924/903/802 for stillbirth/gestational age/birthweight analysis. Non-smoking women who lived with smokers (28%) were categorized as ‘exposed’ to second hand smoke (SHS).

METHODS: House-to-house surveys with questionnaire administration and medical records abstraction by trained personnel at recruitment and follow-up.

OUTCOME MEASURES: Stillbirth (no evidence of life at birth after at least 20 weeks of gestation), low birthweight (<or= 2,499 g) and preterm birth (<or= 258 days of gestation).

RESULTS: Rates of low birthweight and preterm birth were not significantly different between exposed and non-exposed. Hazard ratio for stillbirth in SHS exposed women (n = 261) was 2.2 (95% confidence interval 1.1-4.4). Survival times differed significantly between exposed and non-exposed, p = 0.012. Exposed and non-exposed groups differed significantly by education, socioeconomic status, parity and access of antenatal care. After adjustment for these potential confounders in Cox proportional hazards models (gestational age in days as timescale), hazard ratios for stillbirth in the exposed group remained unchanged: 2.1 (1.1-4.3).

CONCLUSIONS: Pregnant women living with smokers in their household have a significantly higher risk of stillbirth, independent of differences in socio-demographic characteristics and antenatal care.

PMID:20367432[PubMed - indexed for MEDLINE]

Abstract

INTRODUCTION: Tobacco consumption is a major source of mortality and morbidity in India. Prevalence of smokeless tobacco (ST) consumption in India is around 20%. Studies have shown increased prevalence of cardiovascular disease risk factors and an increased incidence of adverse cardiovascular events among the ST consumers. This is a cross-sectional study done to look into the association of exclusive smokeless tobacco consumption with hypertension, in an adult male rural population of north India.

METHODS: All male residents of a village in north India above 15 years of age, who did not have any acute or chronic morbidity were included after taking an informed consent. Subjects were interviewed regarding their demographic profile, socioeconomic status and tobacco consuming habits. Current smokeless tobacco user was defined as one who has ever consumed tobacco orally in past 1 month. Blood pressure of the subjects was also recorded. Cuts off used for systolic and diastolic hypertension were 140 mm Hg and 90 mm Hg respectively.

RESULTS: 443 subjects were included in the study. Prevalence of exclusive ST users was 21% while 19.4% consumed both forms and 26.6% did not take any form of tobacco. Mean systolic and diastolic BP were significantly higher in exclusive ST users (systolic BP=139.2+17.4, diastolic BP = 86.8+11.5) as compared to the non users (systolic BP= 135.7+18.8, diastolic BP= 82.6 +11.5; p value < 0.05). The prevalence of diastolic hypertension was significantly higher in exclusive ST users as compared to non users (40.9%, 22.9%; p value = 0.01). The OR for diastolic hypertension in male ST users was 2.3(95% C.I. = 1.3-4.3). Prevalence of systolic hypertension was higher in exclusive ST users too though this was not statistically significant (43%, 36.4%; p value = 0.39).

CONCLUSION: ST consumption is associated with increased prevalence of high BP in the adult male rural population. This is an indicator of increased predisposition to major adverse cardiac events later in their life time. Prevention of ST consumption could be an important intervention in preventing the ongoing upswing in prevalence of chronic heart disease.

PMID: 19930693 [PubMed] PMCID: PMC2789706


Abstract

BACKGROUND: Previous studies elsewhere have shown higher serum immunoglobulin E (IgE) levels in smokers and an association between smoking and sensitisation to allergens. Such information is not available for Indian population. Hence, the present study was carried out to evaluate the effect of smoking on atopic predisposition and sensitisation to aeroallergens.

METHODS: A total of 70 subjects were included in the present study comprising of 25 smokers, 22 reformed smokers and 23 non-smokers. Absolute eosinophil count (AEC), serum total IgE levels and skin prick test (SPT) against common aeroallergens were performed in all the subjects along with breath carbon monoxide (CO) levels and pulmonary function tests.

RESULTS: Smokers showed significantly higher serum total IgE levels (328.80 +/- 161.82 IU/mL) as compared to reformed smokers 177.27 +/- 86.47 IU/mL) and non-smokers (29.56 +/- 9.75 IU/mL). A number of subjects among smokers and reformed smokers elicited positive SPT reactions to various allergen extracts. Non-smokers did not show any significant positive skin reaction. The AECs were slightly higher in smokers (350 +/- 1145.61/mm3) as compared to reformed smokers (305 +/- 146.33/ mm3). Breath CO was considerably higher (greater than three times) in smokers than reformed smokers. However, reformed smokers showed greater airways obstruction than smokers. The former also had higher Brinkman index (646.81 +/- 392.32) as compared to the latter (448.36 +/- 279.86).

CONCLUSIONS: Smokers had significantly higher IgE serum levels than reformed smokers and non-smokers. Smoking seems to induce an atopic orientation and allergen sensitisation in individuals.

Abstract

A significantly higher mean hemoglobin level in women smokers in comparison to nonsmokers with a generalized rightward shift of the hemoglobin distribution curve has been reported at the population level. Studies on pregnant women, however, have often associated smoking with decreased hemoglobin levels, although not consistently. We examined whether smokeless tobacco use during pregnancy influenced hemoglobin levels in a population-based cohort of 918 pregnant women in Mumbai, India. Mean hemoglobin levels (Hb) were significantly lower in users (10.00 g/dl) compared with nonusers (10.46 g/dl), p<.000. Anemia (Hb<10 g/dl) was significantly associated with smokeless tobacco in the univariate analysis (OR = 1.7, 95% CI 1.2-2.5). There was no change after adjusting odds ratios for potential confounders in multivariate analysis (OR = 1.7, 95% CI 1.2-2.5). The odds ratios for anemia were adjusted for age of mother, education, socioeconomic status, type of residence, lower body mass index, parity, vegetarian or non-vegetarian food habit, and hemodilution during pregnancy. The results suggest that smokeless tobacco use during pregnancy is associated with lower hemoglobin levels, as has often been observed with cigarette smoking. Smokeless tobacco use is widely prevalent among women in Southeast Asia and is gaining popularity across the world as a safe alternative to smoking. Further exploration and clarification of this association is therefore of considerable importance to public health.


Abstract

The objective of this study was to investigate the effects of indoor air pollution on respiratory function of children (aged 7-15 years). The study took place at Ashok Vihar, an urban locality in the northwest part of Delhi during the summer months of June and July 2004. The team did house visits. The questionnaire, administered at the house itself, asked about the history of smoking in the family, type of cooking fuel used, duration of cooking, ventilation and lighting at the cooking place, and other confounders. In total, 441 children (59% male, 41% female) between ages 7 and 15 years were considered for the study, and a detailed profile was collected. Clinical examination with special reference to respiratory system was done. Pulmonary function tests/peak expiratory flow rates of each child were measured. Indoor air pollutant (suspended particulate matter, SO(2), NO(2)) was measured, and the effect of these pollutants on the children's respiratory function was analyzed. The respiratory health profile suggests that children had cough, sputum production, shortness of breath, wheezing, common cold, and throat congestion. Indoor SO(2), NO(2), and suspended particulate matter levels were high in houses where there was a family history of smoking. SO(2) level was significantly high according to occupancy per room. NO(2) and suspended particulate matter levels were significantly high in houses where children had respiratory problems. It is concluded that indoor air pollution had an association with respiratory function of children.


Abstract

High Density Lipoprotein (HDL) transports in plasma, phospholipids, cholesterol, and triacylglycerol. The cholesterol associated with HDL (HDLc) is cholesterol that is scavenged from peripheral tissues back to liver. The liver converts this cholesterol into bile acids, bile salts, and esterifies the rest and secretes them into bile. Low HDLc is a risk factor for atherogenesis. Higher levels of HDLc in plasma are therefore an index of safety from coronary heart disease and atherosclerosis. Regular physical exercise, and changes in life style like cessation of...
smoking, lowered alcohol consumption, modified dietary fat intake and certain medications can improve the level of HDLc in plasma.

PMID:18092443[PubMed - indexed for MEDLINE]


**Abstract**

**BACKGROUND:** Maternal cigarette smoking has been causally associated with an increased risk for stillbirth. Preliminary reports suggest an increased risk for stillbirth with smokeless tobacco use during pregnancy.

**METHODS:** We conducted a population-based prospective cohort study to investigate this association by using a house-to-house approach to recruit 1,217 women who were between 3 and 7 months' gestation. Of these, 96% were contacted after delivery to determine the pregnancy outcome. Demographic and maternal variables which were apparently associated either with stillbirth or with smokeless tobacco use (OR ≥ 1.5) were included as potential confounders. Stillbirth was defined as any delivery of a dead fetus after 20 completed weeks of gestation. We used time-to-event methods to analyze the risk of stillbirth.

**RESULTS:** Overall occurrence of stillbirth among singleton deliveries in this population was 4.1%. Smokeless tobacco use was reported by 17% of women; 8.9% of smokeless tobacco users had a stillbirth compared with 3.1% among nonusers (life-table adjusted hazard ratio = 3.1; 95% confidence interval = 1.7-5.6). After adjustment by the Cox proportional hazards procedure for age, educational and socioeconomic background, working status of mother, parity, prenatal care variables, and place of delivery, the risk for stillbirth in users was 2.6 (95% confidence interval: 1.4-4.8). Most women used mishri (a pyrolyzed tobacco product often used as dentifrice), and there was a dose-response relationship between the daily frequency of use and stillbirth risk. The risk of stillbirth associated with smokeless tobacco use was greater in earlier gestational periods.

**CONCLUSIONS:** Smokeless tobacco use during pregnancy increases stillbirth risk, with a risk at least as great as that associated with maternal cigarette smoking.

PMID:16357594[PubMed - indexed for MEDLINE]


**Abstract**

**PURPOSE:** To assess prevalence, potential risk factors, and population attributable risk percentage (PAR%) for age-related macular degeneration (AMD) in the Indian state of Andhra Pradesh.

**METHODS:** A population-based study, using a stratified, random, cluster, systematic sampling strategy, was conducted in the state of Andhra Pradesh in India from 1996 to 2000. Participants from 94 clusters in one urban and three rural areas representative of the population of Andhra Pradesh underwent a detailed interview and a detailed dilated ocular evaluation by trained professionals. In this report, the authors present the prevalence estimates of AMD and examine the association of AMD with potential risk factors in persons aged 40 to 102 years (n = 3723). AMD was defined according to the international classification and grading system. Standard bivariate and multivariate analyses were performed to identify the potential risk factors for AMD. PAR% was calculated by Levin’s formula.

**RESULTS:** AMD was present in 71 subjects—an age-gender-area-adjusted prevalence of 1.82% (95% confidence interval [CI], 1.39%-2.25%). Risk factors that were significant in bivariate analyses were considered for multivariate logistic regression analysis. Multivariate analysis showed that the adjusted prevalence of AMD was significantly higher in those 60 years of age or older (odds ratio [OR], 3.55; 95% CI, 1.61-7.82) and history of prior cigar smoking (OR, 3.29; 95% CI, 1.42-7.57). Presence of cortical cataract and prior cataract surgery were significantly associated with increased prevalence of AMD (adjusted OR, 2.87; 95% CI, 1.57-5.26 and 3.79; 95% CI, 2.1-6.78), respectively. The prevalence of AMD was significantly lower in light alcohol drinkers (adjusted OR,
0.38; 95% CI, 0.19-0.76) compared with nondrinkers. The PAR% for hypertension and heavy cigar smoking was 10% and 14%, respectively, in this population.

**CONCLUSIONS:** The prevalence of AMD in this south Indian population is similar to those reported in other developed countries. Abstinence from smoking may reduce the risk of AMD in this population.

PMID:16303932[PubMed - indexed for MEDLINE]


**Abstract**

**PURPOSE:** To investigate the associations between tobacco smoking and various forms of cataracts among the people of a state in India.

**METHODS:** A population-based cross-sectional epidemiologic study was conducted in the south Indian state of Andhra Pradesh (AP). A total of 10,293 subjects of all ages from one urban and three rural areas, representative of the population of AP, were interviewed, and each underwent a detailed dilated ocular evaluation by trained professionals. Data were analyzed for 7416 (72%) of the subjects aged >15 years.

**RESULTS:** Increasing age was significantly associated with all cataract types and history of prior cataract surgery and/or total cataract. In multivariate analyses, after adjusting for all demographic factors and for history of smoking, females, illiterate persons, and those belonging to the extreme lower socioeconomic status group were found to have a significantly higher prevalence of any cataract, adjusted odds ratio (OR)=1.60 (95% confidence interval [CI]: 1.24-1.96), 1.46 (95% CI: 1.17-1.70), and 1.92 (95% CI: 1.14-3.24), respectively. After adjustment, cigarette and cigar smokers had a significantly higher prevalence of any cataract, adjusted OR=1.51 (95% CI: 1.10-2.06) and 1.44 (95% CI: 1.12-1.84), respectively, compared with those who had never smoked ("never-smokers"). A significantly higher prevalence of nuclear, cortical cataract, and history of prior cataract surgery and/or total cataract was found among cigarette smokers. A dose-response relationship was seen with respect to cigarette and cigar smoking. After adjustment, compared with never-smokers, cigarette smokers who smoked heavily (>14 "pack-years" of smoking) had a significantly higher prevalence of nuclear cataract (OR=1.65; 95% CI: 1.10-2.59), cortical cataract (OR=2.11; 95% CI: 1.38-3.24), and history of prior cataract surgery and/or total cataract (OR=2.10; 95% CI: 1.05-4.22). Nuclear cataract was significantly higher in cigar smokers (adjusted OR=1.55; 95% CI: 1.16-2.01) and in cigar smokers who smoked heavily (>21 person-years of smoking; OR=1.50; 95% CI: 1.10-1.95), compared with never-smokers.

**CONCLUSIONS:** Consistent with other studies, tobacco smoking was strongly associated with a higher prevalence of nuclear and cortical cataracts and history of prior cataract surgery in this population. These findings suggest yet another need to educate the community on the importance of cessation of tobacco smoking and perhaps incorporating an antismoking message into school health programs.

PMID:15623755[PubMed - indexed for MEDLINE]


**Abstract**

**BACKGROUND:** Adverse health effects of exposure to environmental tobacco smoke (ETS) among non-smokers have been studied occasionally in developing countries.

**AIMS:** To study the effects of exposure to ETS on outcome in pregnancy

**SETTINGS AND DESIGN:** A cross-sectional study at a secondary level teaching hospital Material and Methods: Consecutive 576 non-smoking women delivering a singleton live baby were studied. A pre-designed structured questionnaire was used to record the details of exposure to ETS at home. The maternal and foetal variables were compared among those who were exposed to ETS vis-à-vis not exposed. Unpaired Student t-test was used for
the comparison of continuous variables and Fisher's Exact test was used for categorical variables. Multiple logistic regression analysis was performed after including all variables found to have significant differences on univariate analysis.

**RESULTS:** Of the 576 women studied 141 (24%) were exposed to ETS. In the mothers exposed to ETS, there was a significantly higher incidence of pre-term birth (24.1% vs. 16.1%; \( P = 0.027 \)) and small-for-gestation babies (31.9% vs. 17.2%; \( p<0.001 \)) as compared to unexposed mothers. The mean birth weight of the babies born to the mothers exposed to ETS was 138 g less than that of babies in the unexposed group (2632 \( -/+577 \) g vs. 2770 \( -/+562 \) g respectively, \( p = 0.014 \)). The multiple logistic regression analyses showed that ETS exposure during pregnancy was significantly associated with a higher risk of small-for-gestation babies (OR 2.10; 95% CI: 1.27-3.48).

**CONCLUSION:** Exposure to ETS during pregnancy is associated with higher risk of having a small-for-gestation baby.

PMID:15047992[PubMed - indexed for MEDLINE]

3. Tobacco Control Interventions including Policies, Measures and Taxation


**Abstract**

**CONTEXT:** Tobacco is the single largest cause of preventable death among adults globally, as it is in India. Despite this alarming situation, there is very minimal inclusion of tobacco in formal education systems, including the medical discipline, in India. AIMS: The present study analyzed the extent of integration of tobacco control related content in Masters of Public Health (MPH) curricula of various institutes in India.

**MATERIALS AND METHODS:** This cross-sectional study was conducted during January 2011 to May 2011 in all colleges of the country offering a MPH course. The colleges were enlisted using various internet search engines (Google Scholar, Pubmed, and Medline), other published literature and snowball technique. A 50 items semi-structured questionnaire was designed, posted and e-mailed (followed by hard copy) to the Person-In-Charge of the MPH program.

**STATISTICAL ANALYSIS:** Descriptive statistics were used to profile the tobacco control content in respective institutions. All data entry and analysis was conducted using SPSS (version 16) for windows.

**RESULTS:** The duration of the MPH course was two years in all institutes and had accreditation with some affiliated body. Tobacco related diseases were covered under ‘non communicable diseases’ section by every institute. However, a mere 41.4% of institute’s had faculty who had received specialized training in tobacco control. More coverage was given to health risks and effects of smoking as compared to cessation interventions (5 A’s), symptoms of withdrawal and pharmacological treatments. Only 25% of institutes were in process of introducing tobacco courses into their curricula. Lack of expertise and administrative barriers were cited as perceived major problems in inclusion of tobacco control in MPH curricula.

**CONCLUSIONS:** It can be concluded that tobacco control is not receiving adequate attention in public health curricula in India. There is a need for coordinated efforts in the area of tobacco control so as to reduce morbidity and mortality from tobacco induced diseases.

PMID: 25081674[PubMed - in process]

Abstract

BACKGROUND: The role of fiscal policy, especially taxation, though has been proved to be an effective instrument of tobacco control, its application is limited in India due to several reasons. This paper examines the tax structure, price and affordability of SLT products in order to provide evidence on how to strengthen the role of fiscal policy in tobacco control.

METHOD: Secondary data on tax structure and revenue from tobacco products were collected from the Ministry of Finance, Government of India. In order to measure the rise of prices corresponding to the increase in tax rate, the retail price index (RPI) and Whole Price Index (WPI) of SLT products were compared with the price index for all commodities for the period 2006-2012. The affordability of tobacco products is calculated by dividing prices of tobacco products by per capita income.

RESULTS: During the last 6 years, the tax rate on SLT has gone up leading to a rise in the prices of SLT products more than the general price rise. However, the price rise is less than the per capita income growth indicating increasing affordability. The study observed a decline in the consumption of zarda and khaini due to the price increase during 2008-2013. However, the decline in the consumption of zarda is less compared with khaini due to a very low rise in its price.

CONCLUSION: The prices should be raised more than the growth in income to influence consumption. Tax administration is a major challenge for SLT products and strengthening it could enhance revenue collection from SLT products.

PMID: 2552625 [PubMed - as supplied by publisher]


Abstract

OBJECTIVE: (1) To review how current global tobacco control policies address regulation of waterpipe tobacco smoking (WTS). (2) To identify features associated with enactment and enforcement of WTS legislation.


STUDY SELECTION: (1) Countries containing legislative reviews, written by legal experts, were included. Countries prohibiting tobacco sales were excluded. (2) News articles discussing aspects of the WHO FCTC were included. News articles related to electronic-waterpipe, crime, smuggling, opinion pieces or brief mentions of WTS were excluded.

DATA ABSTRACTION: (1) Two reviewers independently abstracted the definition of "tobacco product" and/or "smoking". Four tobacco control domains (smoke free law, misleading descriptors, health warning labels and advertising/promotion/sponsorship) were assigned one of four categories based on the degree to which WTS had specific legislation. (2) Two investigators independently assigned at least one theme and associated subtheme to each news article.

DATA SYNTHESIS: (1) Reviewed legislations of 62 countries showed that most do not address WTS regulation but instead rely on generic tobacco/smoking definitions to cover all tobacco products. Where WTS was specifically addressed, no additional legislative guidance accounted for the unique way it is smoked, except for in one country specifying health warnings on waterpipe apparatuses (2) News articles mainly reported on noncompliance with public smoking bans, especially in India, Pakistan and the UK.

CONCLUSIONS: A regulatory framework evaluated for effectiveness and tailored for the specificities of WTS needs to be developed.

PMID: 25550418 [PubMed - as supplied by publisher]

Abstract

**CONTEXT:** A high prevalence of tobacco use, even among educated professionals like teachers, has been reported from Bihar. After passing of the Cigarette and Other Tobacco Products Act (COTPA) in 2003, there have been major improvements in tobacco control nationwide.

**AIMS:** To compare tobacco use prevalence among school teachers in Bihar reported in 2000 with a survey in 2008 and investigate correlates of current and past tobacco-use.

**METHODS:** Data from the baseline survey of a cluster random sample of 72 government schools conducted during the beginning of two consecutive school years was analyzed.

**RESULTS:**

The prevalence of current tobacco use was 35.5% and past use, 11.3%. Likelihood of current use compared with no use increased with age (odds ratio [OR] =3.27 for > 50 years compared to < 30, 95% confidence interval [CI]: [1.50, 7.13]); whereas that of past use compared to current use decreased (OR = 0.25, 95% CI: [0.09-0.68] for age > 50 years compared to < 30 years).

**DISCUSSION:** Compared to the tobacco use prevalence among Bihar school teachers reported from a survey in the year 2000 (77.4%), the prevalence in this survey in 2008 was much lower and past use, much higher. In the earlier survey, lal dantmajan was counted as a tobacco product. If we do the same in the current survey, and consider ever use, the prevalence even then was 53.9%, lower than the earlier figure. Although the tobacco use among teachers in Bihar is still high, it has decreased after the implementation of COTPA and the cessation has increased.

PMID: 25526243 [PubMed - in process]

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Abstract

**CONTEXT:** In India, 14% of the population use smoked tobacco products. Increasing prices of these products is one of the measures to curb their consumption.

**AIMS:** This study analyzes "unit price" and "daily consumption" of cigarettes and bidis and investigates their relation with each other.

**SETTINGS AND DESIGN:** A cross-sectional survey was conducted in four states of India (Bihar, West Bengal, Madhya Pradesh and Maharashtra) as a part of the International Tobacco Control Policy (TCP) Evaluation Project (the TCP India Project) during 2010-2011.

**METHODS:** Information was collected from adult (aged ≥15) daily exclusive smokers of cigarette/bidi regarding (a) last purchase (purchase in pack/loose, brand and price) and (b) daily consumption. Average unit price and daily consumption was calculated for different brands and states. Regression model was used to assess the impact of price on daily consumption.

**RESULTS:** Bidis were much less expensive (♂ 0.39) than cigarettes (♂ 3.1). The daily consumption was higher (14) among bidi smokers than cigarette smokers (8). The prices and daily consumption of bidis (♂0.33-0.43; 12-15) and cigarettes (♂ 2.93; 5-9) varied across the four states. The unit prices of bidis and cigarettes did not influence their daily consumption. Smokers purchasing bidis in packs paid substantially less per unit and purchase of bidis and cigarettes in packs influenced their consumption positively.

**CONCLUSIONS:** Cigarettes although more expensive than bidis, seem very cheap if compared internationally. Hence, prices of both cigarettes and bidis do not influence their consumption.

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An annotated bibliography of scientific studies done on tobacco topic in WHO South-East Asia Region countries

Abstract

BACKGROUND: Cigarettes and other tobacco products act 2003 (COTPA) is the principal law governing tobacco control in India. Government of Maharashtra in one of its landmark decisions also banned manufacturing, sale and distribution of gutka and pan masala since July 2012. The desired impact and level of enforcement of the COTPA legislation and the gutka and pan masala ban in Maharashtra State, however, needs assessment. Among the many provisions within COTPA, the present study seeks to assess compliance to implementation and enforcement of Section 5 and 6 of COTPA including compliance to gutka and pan masala ban in Mumbai, India.

METHODOLOGY: Six educational institutes (EI) within the Mumbai metropolitan region were selected in a two stage random sampling process. Area around each EI was manually mapped and all the tobacco products selling outlets within the 100 yards distance were listed by trained Field Social Investigators and were observed to determine compliance for Section 5 and Section 6 of the COTPA legislation and for gutka and pan masala ban. The vendors/shop owners manning these outlets were also interviewed for their personal sociodemographic details, self-tobacco use, awareness and perception about ill-effects of tobacco and existing tobacco control legislation in the country.

RESULTS: A total of 222 tobacco retail outlets were listed within 100 yards of the EI in violation to the provisions of Section 6 of COTPA, of which 72 (32.4%) were selling tobacco products on mobile structures. About 53.2% of the tobacco vendors were also users of some form of tobacco. Whereas, nearly 217 (97.7%) vendors were aware about the gutka and pan masala ban in the State, only 48.2% were aware about the existence of COTPA legislation. None of the EI had a display board prohibiting the sale of tobacco products within a radius of 100 yards of their EI. Only 56.3% tobacco outlets had complied with the mandatory warning display boards indicating tobacco products will not be sold to people below 18 years of age. With regards to point of sale advertisement only 25.2% compliance was noted for display of health warning boards at the point of sale. Nearly 48.6% tobacco outlets exhibited >2 display boards and another 43.2% exhibited hoardings with brand pack photo, brand name in violation to the provision under Section 5. Violation by visible stacking and open display of tobacco products for sale was observed at 51.3% of tobacco outlets. While 41% of tobacco outlets were found displaying gutka and pan masala packets in violation to the ban.

CONCLUSIONS: Enacting of the law without robust measures for enforcement has led to widespread noncompliance to the provisions with in the tobacco control legislation in the metropolitan city of Mumbai. Strong and sustainable measures needs to be incorporated both by civic administration and public health departments for its forceful implementation.

PMID: 25526251 [PubMed - in process]


Abstract

BACKGROUND: Global Adult Tobacco Survey India 2009-2010 revealed that more than one-third (35%) of adults in India use tobacco in some form: 21% use smokeless tobacco, 9% smoke, and 5% are mixed users (they smoke and use smokeless tobacco), and the quit rate is very low. In an effort to decrease prevalence of tobacco use, it is thus important to understand the factors that are related to intention to quit among Indian tobacco users. Research has shown consistently that intention to quit is a strong predictor of future quitting. The present study reports the factors encouraging quitting tobacco products in India.

SUBJECTS AND METHODS: Cross-sectional data from Wave 1 of the International Tobacco Control Policy Evaluation India Survey conducted in four cities and surrounding rural areas (i.e. Mumbai [Maharashtra], Patna
[Bihar], Indore [Madhya Pradesh], and Kolkata [West Bengal]) between August 2010 and December 2011 were analyzed. A total of 8051 tobacco users (15+ years) were randomly sampled from 8586 households: 1255 smokers, 5991 smokeless users, and 805 mixed (smoke and smokeless) users. Validated, standardized questions were asked about current tobacco use, intention to quit, and factors encouraging quitting.

RESULTS: Overall, 19.6% of tobacco users intended to quit. Smokers had less intention to quit as compared to smokeless tobacco users whereas mixed users had more intention to quit (odds ratio [OR] =1.48, 95% confidence interval [CI] =1.12-1.97) compared to smokeless tobacco users. Highly educated people were more likely to report intention to quit (OR = 1.82, 95% CI = 1.09-3.02) compared to less educated. Advice by doctors to quit tobacco had a strong impact on intention to quit (OR = 1.68, CI = 1.29-2.15). Tobacco users who were exposed to anti-tobacco messages at work places (OR = 1.74, CI = 1.23-2.46), at restaurants (OR = 1.65, CI = 1.12-2.43), bars (OR = 1.81, CI = 1.07-3.06), on public transportation (OR = 2.14, CI = 1.49-3.08) and on tobacco packages (OR = 1.77, CI = 1.29-2.14) also expressed greater intention to quit tobacco use.

CONCLUSION: Around one-fifth of tobacco users in India intended to quit tobacco use. Higher education, doctor's advice, and anti-tobacco messages were positively associated with users' intention to quit tobacco.

PMID: 25526247 [PubMed - in process]


Abstract

BACKGROUND: India has been implementing smoke-free legislation since 2008 prohibiting smoking in public places. This study aimed to assess the level of compliance with smoke-free legislation (defined as the presence of no-smoking signage and the absence of active smoking, smoking aids, cigarette butts/bidi ends and smoking smell) and the role of enforcement systems in Indian jurisdictions.

METHODS: This was a cross-sectional, retrospective review of reports and primary data sheets of surveys conducted in 38 selected jurisdictions across India in 2012-2013.

RESULTS: Of 20 455 public places (in 38 jurisdictions), 10 377 (51%) demonstrated full compliance with smoke-free law. Educational institutions and healthcare facilities performed well at 65% and 62%, respectively, while eateries and frequently visited other public places (such as bus stands, railway stations, shopping malls, stadia, cinema halls etc.) performed poorly at 37% and 27%, respectively. Absence of no-smoking signage was the largest contributor to non-compliance across all types of public places. Enforcement systems were present in all jurisdictions, but no associations could be demonstrated between these and smoke-free compliance.

CONCLUSION: Smoke-free compliance in public places in India was suboptimal and was mainly related to the absence of no-smoking signage. This warrants further pragmatic and innovative ways to improve the situation.

PMID: 24876270 [PubMed - in process]


Abstract

Intervention for smoking cessation has become an urgent need because of increasing tobacco use and health hazards, especially in developing countries. Smoking cessation will be at different states of readiness. The states may be: (i) not ready (pre-contemplation), (ii) unsure (contemplation), (iii) ready (preparation), (iv) action, and (v) maintenance. Counselling and behavioural management is important. The ‘5 A’s-based intervention in the form of Ask, Advise, Assess, Assist and Arrange is implemented. Pharmacologic management is based on first-line treatment in the form of nicotine replacement therapy, bupropion and varinicline and second-line treatment as clonidine and nortriptalin. Every health professional has obligation to help their patients to quit and the intervention should be diagnostic and therapeutic. The best results are obtained by behavioural and social support combined with pharmacotherapy whenever needed. The paper highlights the important component of intervention in smoking cessation.

Abstract

CONTEXT: A growing number of cities, districts, counties and states across the globe are going smoke-free. While an Indian national law namely Cigarettes and Other Tobacco Products Act (COTPA) exists since 2003 and aims at protecting all the people in our country; people still smoke in public places.

AIM: This study assessed knowledge and perceptions about smoking, SHS and their support for Smoke-free laws among people residing in Mohali district, Punjab. Materials and Methods: This cross-sectional study was conducted in Mohali district of Punjab, India. A sample size of 1600 people was obtained. Probability Proportional to Size technique was used for selecting the number of individuals to be interviewed from each block and also from urban and rural population. Statistical Analysis Used: We estimated proportions and tested for significant differences by residence, smoking status, literacy level and employment level by means of the chi-square statistics. Statistical software SPSS for Windows version 20 was used for analysing data.

RESULTS: The overall prevalence of current smoking among study participants was 25%. Around 96% were aware of the fact that smoking is harmful to health, 45% viewed second-hand smoke to be equally harmful as active smoking, 84.2% knew that smoking is prohibited in public places and 88.3% wanted the government to take strict actions to control the menace of public smoking. Multivariate logistic regression analysis showed that people aged 20 years and above, unemployed, urban, literate and non-smokers had significantly better perception towards harms of smoking. The knowledge about smoke free provisions of COTPA was significantly better among males, employed individuals, urban residents, and literate people.

CONCLUSIONS: There was high knowledge about deleterious multi-dimensional effects of smoking among residents and a high support for implementation of COTPA. Efforts should be taken to make Mohali a "smoke-free district".

PMID: 25494132 [PubMed - as supplied by publisher]


No abstract available

PMID: 25093223 [PubMed - indexed for MEDLINE]


Abstract

BACKGROUND: Compliance survey of smoke-free law is an effective means of measuring progress towards a smoke-free society. They also help policy makers to take action where strengthening measures are required. India has a comprehensive tobacco control law known as Cigarettes and Other Tobacco Products Act (COTPA 2003) which prohibits smoking in public places and requires display of 'No smoking' signages with proper specifications at conspicuous points. However, its implementation and enforcement are still a matter of concern.

AIMS AND OBJECTIVES: To ascertain the level of compliance with smoke-free law in public places of a district of North India.

METHODOLOGY: A cross sectional study was conducted in the months of November-December 2011 in district SAS Nagar Mohali of North India. The public places including hotels/restaurants/bars/shopping malls, government offices, educational institutions, healthcare facilities and transit stations were surveyed. The study tool was adapted from the guide on 'Assessing compliance with smoke-free law' developed jointly by the
Campaign for Tobacco Free Kids, Johns Hopkins Bloomberg School of Public Health and International Union against Tuberculosis and Lung Disease.

RESULTS: The overall compliance rate towards section 4 of COTPA was 92.3%. No active smoking was observed in 94.2% of the public places. In 90% of the public places 'No Smoking' signage were displayed as per COTPA. Health and educational institutions had maximum compliance with the smoke-free law while transit sites showed the least compliance.

CONCLUSIONS: Compliance to the smoke-free law was high in the study.

PMID: 23322311 [PubMed - in process]

Mudur G. India's health ministry and doctors call for higher taxes on tobacco. BMJ. 2014 Jun 25; 348:g4269. doi: 10.1136/bmj.g4269.

No abstract available
PMID: 2496547 [PubMed - indexed for MEDLINE]


Abstract

INTRODUCTION: Almost a fifth of the world's tobacco is consumed in smokeless form. Its consumption is particularly common in South Asia, where an increasing array of smokeless tobacco (SLT) products is widely available. Mindful of the growing public health threat from SLT, a group of international academics and policy makers recently gathered to identify policy and knowledge gaps and proposed strategies to address these.

METHODS: We reviewed key policy documents and interviewed policy makers and representatives of civil society organizations in 4 South Asian countries: Bangladesh, India, Nepal, and Pakistan. We explored if SLT features in existing tobacco control policies and, if so, the extent to which these are implemented and enforced. We also investigated barriers to effective policy formulation and implementation. The findings were presented at an international meeting of experts and were refined in the light of the ensuing discussion in order to inform policy and research recommendations.

RESULTS: We found that the existing SLT control policies in these 4 South Asian countries were either inadequate or poorly implemented. Taxes were low and easily evaded; regulatory mechanisms, such as licensing and trading standards, either did not exist or were inadequately enforced to regulate the composition and sales of such products; and there was little or no cessation support for those who wanted to quit.

CONCLUSIONS: Limited progress has been made so far to address the emerging public health threat posed by SLT consumption in South Asia. International and regional cooperation is required to advocate for effective policy and to address knowledge gaps.

PMID: 24616238 [PubMed - in process]


Abstract

Being the second largest consumer of tobacco in the world and with more than 65% of its population below the age of 35, India would face electronic cigarettes (ECs) as an enormous public health challenge in future. In the absence of established facilities for tobacco cessation in the country, ECs may provide an additional opportunity for the industry to project itself as a harm-reduction crusader. Regulating ECs as tobacco products or as drugs is not a prudent option in the Indian context. Banning ECs seems to be the most plausible approach at present. However, in the long run, India should be open to new research. More significantly, policy makers in India should be wary of the lead time before a ban is implemented—a shorter intervening period could ensure that a well-
established, better politically connected and more defiant EC industry, aggressively promoting ECs to Indian youth, never becomes a reality.

PMID:24938513[PubMed - as supplied by publisher]


No abstract available

PMID: 25035287 [PubMed - indexed for MEDLINE]


Abstract

INTRODUCTION: Tobacco is the greatest disease-producing product which is known to man and it is a primary cause of many oral diseases and adverse oral conditions. This study was conducted to bring the behavioural changes and to educate individuals about the harmful effects of tobacco.

METHOD: Subjects reporting to the tobacco cessation centre of the Department of Public Health Dentistry and giving a history of tobacco consumption (smoking/smokeless) within past 30 day period were randomized into 2 groups: cognitive behavioural therapy (CBT) group (study group) and Basic health education (BHE) group (control group). Baseline evaluation (of demographic parameters, smoking/ smokeless behaviour) was done and Fagerstrom's test for Nicotine Dependence (FTND) was used to assess subjects' nicotine addiction levels. Follow up was done at intervals of 2 weeks and 4 weeks to assess the reduction in the mean FTND score. Appropriate statistical analysis was performed (Paired and Unpaired t-test).

RESULTS: Of all the subjects who reported to the department, 40 subjects were recruited in the study. A majority of the subjects were males who belonged to rural areas, who had completed high school and most of them had consumed more than 10 sachets of pan masala daily, for an average of 10 years. In both CBT and BHE groups, significant reductions in mean Fagerstrom scores at 1st and 2nd follow ups from baseline and between 1st and 2nd follow ups were seen. But when both groups were compared, reductions in mean Fagerstrom scores were found to be more in CBT group than in BHE group at all-time intervals, though it was not statistically significant.

CONCLUSION: Any intervention given to tobacco users from either CBT or BHE groups helped the patients in quitting habit of tobacco.

PMID: 24959516 [PubMed] PMCID: PMC4064918


Abstract

BACKGROUND: Smoking tobacco affects the health of smokers as well as non-smokers who are exposed to secondhand smoke. The Government of India enacted the Cigarettes and Other Tobacco Products Act in 2003, which included a ban on smoking in public places and on sale of tobacco around educational institutions. We assessed the extent of compliance with these laws in restaurants and educational institutions in Chennai, Tamil Nadu, India.

METHODS: We conducted a cross-sectional survey using an observation checklist in restaurants and educational institutions in Chennai. We used cluster sampling for restaurants and random sampling for schools and colleges. We collected data regarding the signage displaying prohibition of smoking as per the law and sale of tobacco products around educational institutions. We estimated the proportions for various indicators.

RESULTS: Among the 400 restaurants surveyed, 371 (92.8%) did not have any signage displaying prohibition of smoking and of the 29 restaurants with signage, only 4 were as per the specifications. There were 62 (15.5%)
smoking events in restaurants at the time of visit for survey. Among the 287 schools surveyed, only 8 (2.8%) had the signage displaying prohibition of smoking and 2 (0.7%) had the signage for ban on sale of tobacco products. Of the 54 colleges surveyed, 8 (14.8%) had the signage displaying prohibition of smoking and 7 (13%) had the signage for ban on sale of tobacco products.

**CONCLUSION:** There was low compliance of smoke-free laws in restaurants and educational institutions in Chennai. We recommend a robust monitoring mechanism to ensure the enforcement of smoke-free laws in public places.

PMID: 25471758 [PubMed - indexed for MEDLINE]


**Abstract**

**BACKGROUND:** India has 275 million adult tobacco users and tobacco use is estimated to contribute to more than a million deaths in the country each year. There is an urgent need to develop and evaluate affordable, practicable and scalable interventions to promote cessation of tobacco use. Because tobacco use is so harmful, an increase of as little as 1 percentage point in long-term quit success rates can have an important public health impact. This protocol paper describes the rationale and methods of a large randomized controlled trial which aims to evaluate the effectiveness of a brief scalable smoking cessation intervention delivered by trained health professionals as an outreach programme in poor urban communities in India.

**METHODS/DESIGN:** This is a pragmatic, two-arm, community-based cluster randomized controlled trial focused on tobacco users in low-income communities. The treatment arm is a brief intervention comprising brief advice including training in craving control using simple yogic breathing exercises (BA-YBA) and the control arm is very brief advice (VBA). Of a total of 32 clusters, 16 will be allocated to the intervention arm and 16 to the control arm. Each cluster will have 31 participants, making a total of 992 participants. The primary outcome measure will follow the Russell Standard: self-report of sustained abstinence for at least 6 months following the intervention confirmed at the final follow-up by salivary cotinine.

**DISCUSSION:** This trial will inform national and international policy on delivery of scalable and affordable brief outreach interventions to promote tobacco use cessation in low resource settings where tobacco users have limited access to physicians and medications.

PMID: 24417235 [PubMed - in process]


**Abstract**

**BACKGROUND:** Smokers with suspected COPD seek medical attention when they become dyspnoeic on mild to moderate exertion, but by than half of the ventilatory reserves are lost irreversibly. Hence it seems logical to diagnose COPD early before development of significant symptoms. Since smoking cessation in early COPD is found to reduce rapid decline of ventilatory function in smokers, its early detection in asymptomatic smokers is likely to motivate smokers to make an attempt to quit smoking thereby halting its progression to more advanced stage.

**MATERIAL AND METHODS:** The selection of subjects was done by high risk population screening in various military institutions in and around Pune city of Maharashtra. Inclusion criteria included regular smokers, 30 years of age and above with no significant respiratory symptoms except for occasional cough and willing to undergo spirometry.

**RESULTS:** A total of 460 individuals were evaluated by spirometry. Overall airway obstruction was seen in 58 (12.60%) subjects. Mild obstruction was seen in 40 (68.9%) and moderate obstruction in 18 (31%) subjects. Airway obstruction was seen in 24 (8.82%) individuals who were less than 40 years of age and in 34 (18%) who were more than 40 years of age (p < 0.005). Obstruction was noticed in 42 (24.70%) out of 170 subject with
smoking index \( > 200 \) and \( 16 (5.51\%) \) out of 290 subjects with smoking index of \( < 200 \) (\( p < 0.005 \)). In smokers more than 40 years of age and with smoking index more than 200 (\( n = 184 \)), 48 (26\%) had obstruction and in smokers less than 40 years of age and smoking index less than 200 (\( n = 276 \)), 15 (5.43\%) had obstruction (\( p < 0.005 \)).

**CONCLUSION:** Early detection of COPD by spirometry especially in smokers more than 40 years of age and with smoking index of more than 200 is likely to reduce the overall burden of disease.

PMID:25327066[PubMed - indexed for MEDLINE]


Abstract

**OBJECTIVE:** To assess whether being employed in a smoke-free workplace is associated with living in a smoke-free home in 15 low and middle income countries (LMICs).

**METHODS:** Country-specific individual level analyses of cross-sectional Global Adult Tobacco Survey data (2008-2011) from 15 LMICs was conducted using multiple logistic regression. The dependent variable was living in a smoke-free home; the independent variable was being employed in a smoke-free workplace. Analyses were adjusted for age, gender, residence, region, education, occupation, current smoking, current smokeless tobacco use and number of household members. Individual country results were combined in a random effects meta-analysis.

**RESULTS:** In each country, the percentage of participants employed in a smoke-free workplace who reported living in a smoke-free home was higher than those employed in a workplace not smoke-free. The adjusted odds ratios (AORs) of living in a smoke-free home among participants employed in a smoke-free workplace (vs. those employed where smoking occurred) were statistically significant in 13 of the 15 countries, ranging from 1.12 [95% CI 0.79-1.58] in Uruguay to 2.29 [1.37-3.83] in China. The pooled AOR was 1.61 [1.46-1.79].

**CONCLUSION:** In LMICs, employment in a smoke-free workplace is associated with living in a smoke-free home. Accelerated implementation of comprehensive smoke-free policies is likely to result in substantial population health benefits in these settings.


Abstract

**INTRODUCTION:** The tobacco epidemic has been rapidly spreading in many of the poorer nations of the world, including India. Although studies assessing the impact of prices on youth smoking in countries such as the United States are abundant, comparable research on Indian youth has been largely unavailable due to lack of data at the national level. This study aims to bridge this disparity in tobacco research.

**METHODS:** We used data from the Global Youth Tobacco Survey, a national survey among 73,356 youth of age 13-15 years in India, to estimate the price elasticity of tobacco use among Indian youth for three tobacco products: cigarettes, bidi, and gutka. **RESULTS:** Higher prices can be an effective deterrent to youth tobacco use, irrespective of the form of tobacco. Among the products considered, bids have the highest price elasticity of participation (-2.70), followed by gutka (0.58) and cigarettes (-0.40). In gender-specific analyses, girls have significantly higher participation price elasticities than boys.

**CONCLUSION:** The results of this study indicate that fiscal measures to increase the price of tobacco products would be effective in curbing the tobacco epidemic in India.

PMID: 23743096 [PubMed - indexed for MEDLINE]
Nicotine in tobacco smoke causes not only pathophysiological changes in the smoker's body, but also develops tolerance to its own action with repeated use. Repeated exposure to nicotine develops neuroadaptation of the receptors, resulting in tolerance to many of the effects of nicotine. Pharmacotherapies for smoking cessation should reduce withdrawal symptoms and block the reinforcing effects of nicotine without causing excessive adverse effects. All forms of nicotine replacement therapy (NRT) - gum, patches and inhaler - and bupropion are safe and effective for increasing smoking cessation rates in the short and long-term use. Combination NRT (more than one therapy) may be indicated in patients who have failed monotherapy.

PMID: 24574567 [PubMed] PMCID: PMC3927255

INTRODUCTION: Intention to quit and setting a quit date are key steps in the process towards improving quit rates and are thus an integral part of tobacco cessation efforts. The present study examined various motivating factors of "intention to quit" and "setting a quit date" in patients visiting public health facilities in two states of India.

METHODS: A total of 1569 tobacco-users visiting public health facilities in 12 districts of the states of Andhra Pradesh and Gujarat were assessed through an interviewer-administered questionnaire. Bivariate and multivariable logistic regression was performed to assess the effect of socio-demographic characteristics, nicotine dependence, previous quit attempts and motivational factors on "intention to quit within 30 days" and "setting a quit date".

RESULTS: Only 12% of patients intended to quit tobacco within 30 days and about 11% of them were ready to set a quit date. Respondents aged above 25 years were 53% less likely to quit tobacco within 30 days when compared to those below 25 years (95% Confidence Intervals [CI]: 0.22 to 0.99). Smokeless tobacco users were associated with an odds ratio (OR) of 2.05 (95% CI: 1.15 to 3.65) for "setting a quit date" when compared to smokers. Those with 1 to 5 previous quit attempts (in the past twelve months) were associated with an OR of 2.2 (95% CI: 1.38 to 3.51) for "intention to quit" and 2.46 (95% CI: 1.52 to 3.96) for "setting a quit date". "Concern for personal health" and "setting an example for children" were associated with ORs of 3.42 (95% CI: 1.35 to 8.65) and 2.5 (95% CI: 1.03 to 6.03) respectively for "setting a quit date". CONCLUSIONS: This study is amongst the first in India to explore factors associated with the "intention to quit" and "setting a quit date" among patients visiting public health facilities. Our findings suggest that socio-economic and individual-level factors are important factors depicting intention to quit and setting a quit date. We recommend the need for well-defined studies to understand the long-term effects of factors influencing tobacco cessation for patients visiting public health facilities in India.

PMID: 24444137 [PubMed] PMCID: PMC3904700

Abstract

One in three adults in India uses tobacco, a highly addictive substance in one or other form. In addition to prevention of tobacco use, offering evidence-based cessation services to dependent tobacco users constitutes an important approach in addressing this serious public health problem. A combination of behavioral methods and pharmacotherapy has shown the most optimal results in tobacco dependence treatment. Among currently available pharmacological agents, drugs that preferentially act on the α4 β2-nicotinic acetyl choline receptor like varenicline and cytisine appear to have relatively better cessation outcomes. These drugs are in general well tolerated and have minimal drug interactions. The odds of quitting tobacco use are at the very least doubled with the use of partial agonists compared with placebo and the outcomes are also superior when compared to nicotine replacement therapy and bupropion. The poor availability of partial agonists and specifically the cost of varenicline, as well as the lack of safety data for cytisine has limited their use worldwide, particularly in developing countries. Evidence for the benefit of partial agonists is more robust for smoking than other smoking cessation interventions.

PMID: 23743096 [PubMed - indexed for MEDLINE] PMCID: PMC3927255


Abstract

smokeless forms of tobacco. Although more studies are needed to demonstrate their effectiveness in different populations of tobacco users, present literature supports the use of partial agonists in addition to behavioral methods for optimal outcome in tobacco dependence.

PMID: 24574554 [PubMed] PMCID: PMC3927240


Abstract

BACKGROUND: Training medical students in tobacco prevention and cessation skills is critical to have competent physicians who are prepared to address the grave levels of morbidity and mortality associated with tobacco use. However, in India, enough attention has not been given to elicit the active participation of physicians in tobacco control. Keeping this in view, a program was undertaken to develop the skills and competence of medical students with the objective of improving medical student inquiry into smoking and the delivery of advice accordingly for patients in their clinical year's routine consultations.

METHODS: The targeted learners were 149 1(st)-year medical and dental students of SCB Medical College, Cuttack, Orissa, India, who had appeared the second semester examination; 84 of the participants were male. Students were allowed to appear a test before the training session on knowledge of tobacco cessation and post test was done after 1.5 months of training. The knowledge score was evaluated to evaluate the learning outcome.

RESULTS: We observed that a curriculum on tobacco intervention could improve relevant knowledge, attitudes and self-confidence and be applied in student’s early clinical experiences.

CONCLUSIONS: There is need of joint action by practicing clinicians, the medical faculty and the curriculum planners of the country to incorporate tobacco cessation into the curriculum.

PMID: 24554994 [PubMed] PMCID: PMC3915476


Summary

Oral diseases are among the most common chronic diseases worldwide and constitute a major public health problem due to the huge health and economic burden on individuals, families, societies, and health care systems. The recent emphasis on the role of determinants of health, common risk factors and their recognition in the context of the growing burden of non-communicable diseases (NCDs) provides good opportunities for integrating oral health into NCD prevention and control efforts. This Strategy for oral health in South-East Asia, 2013-2020, presents guidance to Member States in developing national policy and action plans to improve oral health within existing socioeconomic, cultural, political and health system contexts, fully in line and integrated with planning for prevention and control of NCDs. It expresses the consensus on major strategies in the area of oral health promotion as well as oral disease prevention and control for the South-East Asia Region aiming at reducing the health and socioeconomic burden resulting from oral diseases, reducing oral health inequities, and improving the quality of life of the population

Abstract

**BACKGROUND:** We simulated tobacco control and pharmacological strategies for preventing cardiovascular deaths in India, the country that is expected to experience more cardiovascular deaths than any other over the next decade.

**METHODS AND FINDINGS:** A micro simulation model was developed to quantify the differential effects of various tobacco control measures and pharmacological therapies on myocardial infarction and stroke deaths stratified by age, gender, and urban/rural status for 2013 to 2022. The model incorporated population-representative data from India on multiple risk factors that affect myocardial infarction and stroke mortality, including hypertension, hyperlipidemia, diabetes, coronary heart disease, and cerebrovascular disease. We also included data from India on cigarette smoking, bidi smoking, chewing tobacco, and secondhand smoke. According to the model's results, smoke-free legislation and tobacco taxation would likely be the most effective strategy among a menu of tobacco control strategies (including, as well, brief cessation advice by health care providers, mass media campaigns, and an advertising ban) for reducing myocardial infarction and stroke deaths over the next decade, while cessation advice would be expected to be the least effective strategy at the population level. In combination, these tobacco control interventions could avert 25% of myocardial infarctions and strokes (95% CI: 17%-34%) if the effects of the interventions are additive. These effects are substantially larger than would be achieved through aspirin, antihypertensive, and statin therapy under most scenarios, because of limited treatment access and adherence; nevertheless, the impacts of tobacco control policies and pharmacological interventions appear to be markedly synergistic, averting up to one-third of deaths from myocardial infarction and stroke among 20- to 79-y-olds over the next 10 y. Pharmacological therapies could also be considerably more potent with further health system improvements.

**CONCLUSIONS:** Smoke-free laws and substantially increased tobacco taxation appear to be markedly potent population measures to avert future cardiovascular deaths in India. Despite the rise in co-morbid cardiovascular disease risk factors like hyperlipidemia and hypertension in low- and middle-income countries, tobacco control is likely to remain a highly effective strategy to reduce cardiovascular deaths.

PMID: 23874160 [PubMed - indexed for MEDLINE] PMCID: PMC3706364


**Abstract**

**BACKGROUND:** To illustrate multiple approaches and to assess participation rates adopted for a community based smoking cessation intervention programme in rural Kerala.

**MATERIALS AND METHODS:** Resident males in the age group 18-60 years who were ‘current daily smokers’ from 4 randomly allocated community development blocks of rural Thrissur district, Kerala (2 intervention and 2 control groups) were selected. Smoking status was assessed through house-to-house survey using trained volunteers. Multiple approaches included awareness on tobacco hazards during baseline survey and distribution of multicolour anti-tobacco leaflets for intervention and control groups. Further, the intervention group received a tobacco cessation booklet and four sessions of counselling which included a one-time group counselling cum medical camp, followed by proactive counselling through face-to-face (FTF) interview and mobile phone. In the second and fourth session, motivational counselling was conducted.

**RESULTS:** Among 928 smokers identified, smokers in intervention and control groups numbered 474 (mean age: 44.6 years, SD: 9.66 years) and 454 respectively (44.5 years, SD: 10.30 years). Among the 474 subjects, 75 (16%) had attended the group counselling cum medical camp after completion of baseline survey in the intervention group. Among the remaining subjects (n=399), 88% were contacted through FTF and mobile phone (8.5%). In the second session (4-6 weeks time period), the response rate for individual counselling was 94% (78% through FTF and 16% through mobile phone). At 3 months, 70.4% were contacted by their mobile phone and further, 19.6% through FTF (total 90%) while at 6 months (fourth session), the response rate was 74% and 16.4% for FTF and mobile phone respectively, covering 90.4% of the total subjects. Overall, in the intervention group, 97.4% of subjects were being contacted at least once and individual counselling given.

**CONCLUSION:** Proactive community centred intervention programmes using multiple approaches were found to be successful to increase the participation rate for intervention.

PMID: 23803049 [PubMed - in process]

Abstract

BACKGROUND: Initiation, perpetuation and cessation of smoking are all multifactorial. It is essential to explore interactions among various parameters influencing smoking and its cessation for effective smoking cessation interventions.

OBJECTIVES: To obtain insights into smoking and its cessation among current smokers in India.

MATERIALS AND METHODS: The present study was conducted among current smokers visiting the Department of Oral Medicine and Radiology, Manipal College of Dental Sciences (MCODS), Manipal University, Mangalore. Knowledge, attitudes, behavior, worksite practices towards smoking and its cessation, barriers to smoking cessation and socio-demographic variables were explored using a structured, pretested, self-administered questionnaire.

RESULTS: A total of 175 current smokers participated in the study. Mean knowledge, attitude, worksite practice and barrier scores were 15.2±5.67 (66.1%), 57.5±7.67 (82.1%), 4.18±2.02 (41.8%) and 57.4±12.37 (63.7%) respectively. Correlation analysis revealed: association of knowledge with education, occupation and religion; attitude with education and occupation; worksite practices with occupation; knowledge with attitude; and barriers negatively with worksite practices. The majority (85.7%) of respondents intended to quit smoking and this was associated with higher attitude scores, whereas actual quit attempts were associated with high knowledge, attitudes, worksite practices and low barrier scores.

CONCLUSIONS: Various socio-demographic factors associated with smoking and its cessation were identified. The present study highlights the importance of identifying and targeting these interactions while framing guidelines and interventions for effective tobacco cessation in a developing country like India.

PMID: 23803036 [PubMed - in process]


Abstract

PURPOSE: The objective of this study was to assess the opinion of dental patients who use tobacco towards receiving tobacco cessation counseling and services in a dental college and hospital setting.

MATERIALS AND METHODS: A cross-sectional descriptive survey method using a structured questionnaire was used in this study. Participants were patients attending The Oxford Dental College, Hospital, and Research Center, Bengaluru, India. Each patient in the clinic waiting room was asked by the investigator to complete a 29-item self-administered questionnaire. Descriptive statistics and bivariate analysis using Fisher's exact tests were used for statistical analysis of the data.

RESULTS: Ninety-six percent (n = 770) of tobacco users had previously attempted to quit tobacco and 95.7% were willing to quit. Sixteen percent (n = 132) of respondents reported that they currently used tobacco. About 83% of tobacco users agreed that the student dentist should ask patients whether or not they use tobacco, 79.4% agreed that the student dentist should advise tobacco users to quit, and 81.4% agreed that student dentists should offer information on quitting tobacco to patients who want to quit. Only 12.5% (n = 100) of the patients who use tobacco were aware of the community resources available to quit tobacco.

CONCLUSION: This study shows that patients expect and felt comfortable with receiving tobacco cessation counseling services by oral health professionals in a dental hospital setting.

PMID: 23757455 [PubMed - indexed for MEDLINE]

Abstract

BACKGROUND: Prevalence of tobacco use is higher in the rural than urban areas of India. Unlike tobacco cessation clinics located in urban areas, community-based smoking cessation intervention has the potential to reach a wider section of the community to assist in smoking cessation in the rural setting. The present study aimed to assess the effectiveness of a cessation intervention in rural Kerala state, India. MATERIALS AND METHODS: Current daily smoking resident males in the age group 18-60 years from four community development blocks in rural Kerala were randomly allocated to intervention and control groups. The intervention group received multiple approaches in which priority was given to face-to-face interviews and telephone counselling. Initially educational materials on tobacco hazards were distributed. Further, four rounds of counselling sessions were conducted which included a group counselling with a medical camp as well as individual counselling by trained medical social workers. The control group received general awareness training on tobacco hazards along with an anti-tobacco leaflet. Self-reported smoking status was assessed after 6 and 12 months. Factors associated with tobacco cessation were estimated using binomial regression method. RESULTS: Overall prevalence of smoking abstinence was 14.7% in the intervention and 6.8% in the control group (Relative risk: 1.85, 95% CI: 1.05, 3.25). A total of 41.3% subjects in the intervention area and 13.6% in the control area had reduced smoking by 50% or more at the end of 12 months. Lower number of cigarettes/ bidi used, low nicotine dependence and consultation with a doctor for a medical ailment were the statistically significant predictors for smoking cessation. CONCLUSIONS: Rigorous approaches for smoking cessation programmes can enhance quit rates in smoking in rural areas of India.

PMID: 24377608 [PubMed - indexed for MEDLINE]


Abstract

BACKGROUND: In India, tobacco consumption is responsible for one of the highest rates of oral cancer in the world, the annual oral cancer incidence is steadily increasing among young tobacco users. Studies have documented efforts taken by physicians, doctors and even dentists, in the form of individual or group counseling to curb tobacco use in smoke or smokeless form. However, which one is more effective, still remains an unanswered question. The aim of the study was to compare the effectiveness of individual and group counseling for cessation of the tobacco habit amongst industrial workers in Pune and to compare quit rates.

MATERIALS AND METHODS: An interventional study design was selected for 150 industrial workers which were stratified randomly into three groups (control, individual and group counseling groups) and interventions were provided to individual and group counseling groups over a period of six months, which were then compared with the control group that received brief intervention at the start of the study.

RESULTS: There was significant difference in the quit rates of the participants in the individual counseling group (ICG) and group counseling group (GCG) when compared at 6 months with the control counseling group (CCG). In the individual counseling group was 6% while in group counseling group it was 7.5% after six months of counseling.

CONCLUSIONS: No conclusion could be drawn whether individual or group counseling were better in terms of quit rates. Individual and group counseling groups were definitely better than the control group when compared at 3 and 6 months, respectively.

PMID: 23621201 [PubMed - indexed for MEDLINE]


Abstract

Tobacco abuse is a major preventable cause of premature death and disease, including various cancers. The Global Adult Tobacco Survey India (GATS) 2009-10 revealed that more than one-third of adults use tobacco in
one form or the other. Nearly two in five smokers and smokeless tobacco users made attempts to quit the habit in the past 12 months. Tobacco dependence is a chronic condition characterized by susceptibility of relapse over years. It can be well handled by sustained professional support from health care providers mainly through behavioral counseling and pharmacotherapy. Dental professionals can play a pivotal role in diagnosing and effectively managing tobacco dependence. Dental Institutions have rapidly grown in last two decades across the country and so has the curriculum been adapted to improve student competencies to accommodate changing disease patterns and technological advances, but not in regard to tobacco cessation. Untapped dental manpower like undergraduates, dental hygienists and other paramedical staff need effective training to be more penetrative. The present review paper explores the potential role of dental training institutions and recommends various approaches to counter public health jeopardy of tobacco related diseases.

PMID: 23725194 [PubMed - indexed for MEDLINE]


Abstract

OBJECTIVES: We assessed a school-based intervention designed to promote tobacco control among teachers in the Indian state of Bihar. METHODS: We used a cluster-randomized design to test the intervention, which comprised educational efforts, tobacco control policies, and cessation support and was tailored to the local social context. In 2009 to 2011, we randomly selected 72 schools from participating school districts and randomly assigned them in blocks (rural or urban) to intervention or delayed-intervention control conditions.

RESULTS: Immediately after the intervention, the 30-day quit rate was 50% in the intervention and 15% in the control group (P =.001). At the 9-month post intervention survey, the adjusted 6-month quit rate was 19% in the intervention and 7% in the control group (P = .06). Among teachers employed for the entire academic year of the intervention, the adjusted 6-month abstinence rates were 20% and 5%, respectively, for the intervention and control groups (P = .04).

CONCLUSIONS: These findings demonstrate the potent impact of an intervention that took advantage of social resources among teachers, who can serve as role models for tobacco control in their communities.

PMID: 24028234 [PubMed - indexed for MEDLINE] PMCID: PMC3828698


Abstract

BACKGROUND: India enacted a comprehensive tobacco control law known as cigarettes and other tobacco products act (COTPA) in 2003. However, enforcement of the provisions under the law is still a matter of concern. Compliance survey is an effective tool to measure the status of implementation of the law at various public places. Smoke-free hospital campus demonstrates commitment to good health and sends a pro-healthy signal to the community.

OBJECTIVE: The objective of this study was to assess the compliance to the prohibition of smoking at public places (under section-4 of COTPA) in a tertiary health-care institution in a smoke-free city of India.

MATERIALS AND METHODS: An observational cross-sectional study was conducted at 40 different venues within a tertiary health-care institution in a smoke-free city of India. These places were observed for certain parameters of assessment by a structured checklist, which included evidence of active smoking, evidence of recent smoking, display of signages, presence of smoking aids, cigarette butts and bidi ends.

RESULTS: Overall compliance rate for section-4 of COTPA was found to be mere 23%. Evidence of active smoking was observed in 21 (52.5%) venues. Signages were seen at only 8 places (20%). Butt ends and other smoking aids were seen in 37 (92.5%) and 26 (65%) places respectively.

CONCLUSION: These dismal findings suggest non-compliance to the provisions under COTPA, which calls for a sensitization workshop and advocacy for all the stakeholders.
OBJECTIVE:

The objective of this study was to assess the compliance to the prohibition of smoking at public places. Smoke-free hospital campus demonstrates commitment to good health and sends a pro-healthy signal to teachers, who can serve as role models for tobacco control in their communities.

METHODS:

Compliance monitoring of prohibition of smoking (under section -4 of COTPA) was done through a structured checklist, which included evidence of active smoking, presence of smoking aids, cigarette butts and bidi ends. Within a tertiary health-care institution in a smoke-free city of India, these places were observed for certain parameters of assessment by a structured checklist, which included evidence of active smoking.

RESULTS:

These dismal findings suggest non-compliance to the provisions under COTPA, which calls for a systemic approach to tobacco control initiatives at the state and grassroots levels, along with willingness of the administrative machinery, can present result-oriented tobacco control initiatives at the state and grassroots levels.

PMID: 24042973 [PubMed - as supplied by publisher]


Abstract

BACKGROUND: The World Health Organization (WHO) MPOWER is a technical package of six tobacco control measures that assist countries in meeting their obligations of the WHO Framework Convention Tobacco Control and are proven to reduce tobacco use. The Global Adult Tobacco Survey (GATS) systematically monitors adult tobacco use and tracks key tobacco control indicators.

METHODS: GATS is a nationally representative household survey of adults aged 15 and older, using a standard and consistent protocol across countries; it includes information on the six WHO MPOWER measures. GATS Phase I was conducted from 2008-2010 in 14 high-burden low- and middle-income countries. We selected one key indicator from each of the six MPOWER measures and compared results across 14 countries.

RESULTS: Current tobacco use prevalence rates ranged from 16.1% in Mexico to 43.3% in Bangladesh. We found that the highest rate of exposure to secondhand smoke in the workplace was in China (63.3%). We found the highest 'smoking quit attempt' rates in the past 12 months among cigarette smokers in Viet Nam (55.3%) and the lowest rate was in the Russian Federation (32.1%). In five of the 14 countries, more than one-half of current smokers in those 5 countries said they thought of quitting because of health warning labels on cigarette packages. The Philippines (74.3%) and the Russian Federation (68.0%) had the highest percentages of respondents noticing any cigarette advertising, promotion and sponsorship. Manufactured cigarette affordability ranged from 9.6% in Russia to 8.0% in India.

CONCLUSIONS: Monitoring tobacco use and tobacco control policy achievements is crucial to managing and implementing measures to reverse the epidemic. GATS provides internationally-comparable data that systematically monitors and tracks the progress of the other five MPOWER measures.

PMID: 24758450 [PubMed - indexed for MEDLINE]


PMID: 23730893 [PubMed - indexed for MEDLINE]


Abstract

Developing a synergistic relationship between the government machinery and civil society is crucial for advancing the tobacco control movement in India. With diverse patterns of tobacco use and far reach of the tobacco industry, stringent enforcement mechanisms along with innovative and culturally appropriate advocacy efforts are imperative. In this paper, we evaluate multi-level tobacco control interventions undertaken in the Indian state of Bihar and the subsequent success achieved in strengthening government-non-government partnerships and commitment towards tobacco control in the state. Our experience shows that sustained advocacy at the policy and grassroots levels, along with willingness of the administrative machinery, can present result-oriented tobacco control initiatives at the state and grassroots levels.

PMID: 24758450 [PubMed - indexed for MEDLINE]

Abstract

BACKGROUND: Tobacco addiction is an important public health issue. It is important for health professional to counsel the tobacco users for cessation.

AIM: To enhance communication skills of MBBS (Bachelor of Medicine and Bachelor of Surgery) students in counseling of tobacco users by using interactive teaching methods and examine it by using OSCE.

MATERIALS AND METHODS: It was a before and after comparison study. Communication skills of students were examined by standardized patients (investigators) by objective structured clinical examination (OSCE) method before and after intervention. All the students were trained to enhance the communication skills by role play, interactive session, anecdotes. Statistical analysis was done by using Paired t-test. RESULTS: The difference in scores at all the 3 stations before and after the intervention and also global scores before and after the intervention was statistically highly significant (P = 0.0001).

CONCLUSION AND RECOMMENDATION: Communication skills of students in counseling tobacco users improved after they were given role play, interactive session, anecdotes. Similar model can be used to improve the communication/counseling skills in other important health hazards.

PMID: 24083278 [PubMed] PMCID: PMC3778640


Abstract

Antismoking mass media campaigns can help reduce the prevalence of smoking by discouraging young persons from initiating smoking and by encouraging current smokers to quit. Smoking cessation is a multistage process; intention to quit smoking precedes quit attempts. To assess whether awareness of anti-cigarette smoking information in four mass media channels (television, radio, billboards, and newspapers or magazines) was significantly associated with a current cigarette smoker's intention to quit, CDC analyzed data from 17 countries that participated in the Global Adult Tobacco Survey (GATS). Logistic regression was used to analyze the relationship between awareness of antismoking messages and intent to quit smoking; odds ratios were adjusted to control for demographic factors, awareness of warning labels on cigarette packages, and awareness of tobacco advertisements. In nine of 17 countries, intent to quit was significantly associated with awareness of antismoking messages in a single media channel versus no awareness, with adjusted odds ratios ranging from 1.3 to 1.9. In 14 countries, intent to quit was significantly associated with awareness of messages in multiple channels versus no awareness, with adjusted odds ratios ranging from 1.5 to 3.2. Antismoking information in mass media channels can help reduce tobacco consumption by encouraging smokers to contemplate quitting and might be more effective when presented in multiple channels.

PMID: 23718949 [PubMed - indexed for MEDLINE] (India, Bangladesh, Thailand and Indonesia mentioned in full text)


No abstract available

PMID: 23760368 [PubMed - indexed for MEDLINE] PMCID: PMC3734674

Abstract

For the purpose of this article, Asia refers to WHO's combined South-East Asia and Western Pacific regions and thus includes Australia and New Zealand. Asia has the highest number of tobacco users and is the prime target of transnational tobacco companies. The future of global tobacco control rests in this region and the challenges are clear. China, India, and Indonesia are key markets and Asia is a frontrunner in tobacco control measures, such as plain packaging of cigarettes. Some countries in Asia have a long history of tobacco control activities beginning in the 1970s, and WHO's Western Pacific Region is still the only region where all countries have ratified WHO's Framework Convention on Tobacco Control. We reviewed the history, research, epidemiology, tobacco control action, obstacles, and potential responses and solutions to the tobacco epidemic in this region. Levels of development, systems of government, and population size are very different between countries, with population size ranging from 1500 to 1·3 billion, but similarities exist in aspects of the tobacco epidemic, harms caused, obstacles faced, and tobacco control actions needed.

PMID: 23642699 [PubMed - indexed for MEDLINE]


No abstract available

PMID: 23785686 [PubMed] PMCID: PMC3684733


Abstract

The objective of this paper is to provide a comprehensive evidence based model aimed at addressing multi-level risk factors influencing tobacco use among children and adolescents with multi-level policy and programmatic approaches in India. Evidences around effectiveness of policy and program interventions from developed and developing countries were reviewed using Pubmed, Scopus, Google Scholar and Ovid databases. This evidence was then categorized under three broad approaches: Policy level approaches (increased taxation on tobacco products, smoke-free laws in public places and work places, effective health warnings, prohibiting tobacco advertising, promotions and sponsorships, and restricting access to minors); Community level approaches (school health programs, mass media campaigns, community based interventions, promoting tobacco free norms) and Individual level approaches (promoting cessation in various settings). This review of literature around determinants and interventions was organized into developing the IMPACT framework. The paper further presents a comparative analysis of tobacco control interventions in India vis a vis the proposed approaches. Mixed results were found for prevention and control efforts targeting youth. However, this article suggests a number of intervention strategies that have shown to be effective. Implementing these interventions in a coordinated way will provide potential synergies across interventions. Pediatricians have prominent role in advocating and implementing the IMPACT framework in countries aiming to prevent and control tobacco use among adolescents and children.

PMID: 22592283 [PubMed - indexed for MEDLINE]

Bhaumik S. Private member's bill proposes plain packaging of tobacco products in India. BMJ. 2013 Feb 13; 346:f953. doi: 10.1136/bmj.f953.

PMID: 23407740 [PubMed - indexed for MEDLINE]


Abstract

BACKGROUND: Making tobacco cessation a normative part of all clinical practice is the only way to substantially reduce tobacco-related deaths and the burden of tobacco-related morbidity in the short term. This study was undertaken because information on receptivity to integrate tobacco control education in the medical curriculum is extremely limited in low- and middle-income countries.

METHODS: From five medical colleges (two government) in southern India, 713 (men 59%) faculty and 2585 (men 48%) students participated in our cross-sectional survey. Information on self-reported tobacco use and readiness to integrate tobacco control education in the medical curriculum was collected from both the faculty and students using a pretested structured questionnaire. Multiple logistic regression analysis was done to find the associated factors.

RESULTS: Current smoking was reported by 9.0% (95% CI 6.6-12.1) of men faculty and 13.7% (CI 11.8-15.9) by men students. Faculty who were teaching tobacco-related topics [odds ratio (OR) 2.29; 95% CI 1.65-3.20] compared to those who were not, faculty in government colleges (OR 1.69; CI 1.22-2.35) compared to those in private colleges and medical specialists (OR 1.79; CI 1.23-2.59) compared to surgical and non-clinical specialists were more likely to be ready to integrate tobacco control education in the medical curriculum. Non-smoking students (OR 2.58; CI 2.01-3.33) compared to smokers, and women students (OR 1.80; CI 1.50-2.17) compared to men were more likely to be ready to integrate a tobacco control education in the curriculum.

CONCLUSION: Faculty and students are receptive to introduce tobacco control in the medical curriculum. Government faculty, medical specialists and faculty who already teach tobacco-related topics are likely to be early introducers of this new curriculum.


Abstract

OBJECTIVES: To explore the tobacco-dependent subject's perspectives of what measures are likely to work for tobacco cessation.

MATERIALS AND METHODS: Nicotine-dependent male subjects attending a tertiary level de-addiction center in North India were recruited. Demographic and clinical data was recorded. Open-ended questions were asked to know user's perspective about the measures by which tobacco use can be effectively stopped in the country. The subjects were allowed as many responses as they desired.

RESULTS: A total of 46 subjects were recruited. The median age of the sample was 35 years, with median duration of tobacco use being 12 years. All subjects were males, and most were married, employed, and had urban residence. Supply reducing measures were the most commonly reported to stop tobacco (67.4% of subjects) followed by people quitting tobacco use by themselves (19.6%) and raising awareness through media (13.1%).

CONCLUSION: This pilot study reflects the perspectives of tobacco users for the measures likely to be effective in tobacco cessation. Evaluating the effect of implementation of individual policies may help focusing towards measures that yield greatest benefits.

Public Health Foundation of India (PFHI) and Health related Information Dissemination Among Youth (HRIDAY) on behalf of Advocacy Forum for Tobacco Control (AFTC). Worksite Wellness – A Resource Kit. 2012.

Abstract

BACKGROUND: Tobacco cessation would provide the most immediate benefits of tobacco control to prevent tobacco related disease morbidity and mortality.

METHODS: A tobacco cessation program involving individual and group behavior therapy was implemented in three stages at a worksite. Tobacco quit rates were assessed at the end of each contact session.

RESULTS: Out of the 291 tobacco users identified, 224 participated in the tobacco cessation interventions. At the end of three interventions, 38 (17%) users had successfully quit tobacco use. Presence of clinical oral pre-cancer lesion was found to be associated with quitting (p =0.02 ). Also tobacco users with oral pre-cancer lesions were around three times more likely to quit than those with no lesions (OR= 2.70 95% C.I= 1.20 - 6.05).

CONCLUSION: Cost effective multi-pronged tobacco cessation approaches, inbuilt into other occupational health and welfare activities, are acceptable and feasible to achieve long term sustainable tobacco cessation programs at worksites.

PMID:22524820[PubMed - indexed for MEDLINE]


Abstract

BACKGROUND: Tobacco control and cessation interventions are among the most cost effective medical interventions but health systems in low resource countries lack the infrastructure to promote prevention and cessation among tobacco users. Workplace settings have the potential to provide opportunities and access for tobacco prevention interventions.

METHODS: This is a single group study evaluating tobacco use prevention and cessation through a structured three stage intervention program for tobacco users comprising education on harmful effects of tobacco, oral cancer screening and behavior therapy for tobacco cessation at the worksite.

RESULTS: All the 739 workers who were invited participated in tobacco awareness program and were screened for oral pre cancer lesions. 291 (39.4%) workers were found to be users of tobacco in some form. Education, gender and alcohol use (p<0.0001) were some of the factors associated with tobacco user status. The prevalence of clinical oral precancer lesions among tobacco users was 21.6%. Alcohol consumption (p=0.001), the type of tobacco consumed (p<0.018), personal medical history of chronic diseases (p<0.007) and combined use of alcohol and tobacco (p<0.001) were some factors found to be associated with presence of oral pre cancer lesions.

CONCLUSION: An integrated approach for worksite based tobacco use prevention with oral cancer screening program showed good acceptance and participation and was effective in addressing the problem of tobacco consumption among the factory workers.

PMID:22524819[PubMed - indexed for MEDLINE]

Abstract

INTRODUCTION: Tobacco use is a leading cause of deaths and disabilities in India, killing about 1.2 lakh people in 2010. About 29% of adults use tobacco on a daily basis and an additional 5% use it occasionally. In Odisha, non-smoking forms are more prevalent than smoking forms. The habit has very high opportunity cost as it reduces the capacity to seek better nutrition, medical care and education. In line with the WHO Framework Convention on Tobacco Control (FCTC), the Cigarettes and Other Tobacco Products Act (COTPA) is a powerful Indian national law on tobacco control. The Government of Odisha has shown its commitment towards enforcement and compliance of COTPA provisions. In order to gauge the perceptions and practices related to tobacco control efforts and level of enforcement of COTPA in the State, this cross-sectional study was carried out in seven selected districts.

MATERIALS AND METHODS: A semi-structured interview schedule was developed, translated into Odiya and field-tested for data collection. It mainly contained questions related to knowledge on provisions of section 4-7 of COTPA 2003, perception about smoking, chewing tobacco and practices with respect to compliance of selected provisions of the Act. 1414 samples were interviewed.

RESULTS: The highest percentage of respondents was from the government departments. 70% of the illiterates consumed tobacco as compared to 34% post graduates. 52.1% of the respondents were aware of Indian tobacco control laws, while 80.8% had knowledge about the provision of the law prohibiting smoking in public places. However, 36.6% of the respondents reported that they had 'very often' seen tobacco products being sold 'to a minor', while 31.2% had seen tobacco products being sold 'by a minor'. In addition, 24.8% had 'very often' seen tobacco products being sold within a radius of 100 yards of educational institutions.

PMID: 23167393 [PubMed - indexed for MEDLINE]


Abstract not available

PMID:22783924[PubMed - indexed for MEDLINE]


Abstract

India is the second largest producer and third largest consumer of tobacco. According to GATS India Report (2009-10), the users of only smokeless tobacco (SLT) are more than double than that of smokers. SLT use is an imminent public health problem, which is contributing to high disease burden in India. It is a "unique" tobacco product due to its availability in myriad varieties, easy access, and affordability especially for adolescents. It has been studied to be a gateway product and facilitates initiation. Currently, the Food Safety and Standards Authority of India (FSSAI) have prohibited the use of tobacco and nicotine in any food products; yet, the implementation of a permanent ban on SLT across India is still pending. This paper examines how multiple legislations have failed to effectively control or regulate SLT in India and regionally; thus, there is need to strengthen SLT control efforts as "no ordinary product."

PMID: 23442395 [PubMed - indexed for MEDLINE]


PMID:23442392[PubMed - indexed for MEDLINE]

INTRODUCTION: Tobacco users face barriers not just in quitting, but also in thinking about quitting. The aim of this study was to understand factors encouraging intention to quit from the 2006 International Tobacco Control Policy (TCP) Evaluation India Pilot Study Survey.

MATERIALS AND METHODS: A total of 764 adult respondents from urban and rural areas of Maharashtra and Bihar were surveyed through face-to-face individual interviews, with a house-to-house approach. Dependent variable was "intention to quit tobacco." Independent variables were demographic variables, peer influence, damage perception, receiving advice to quit, and referral to cessation services by healthcare professionals and exposure to anti-tobacco messages. Logistic regression model was used with odds ratio adjusted for location, age, gender, and marital status for statistical analysis.

RESULTS: Of 493 tobacco users, 32.5% intended to quit. More numbers of users who were unaware about their friends' tobacco use intended to quit compared to those who were aware (adjusted OR = 8.06, 95% CI = 4.58-14.19). Higher numbers of users who felt tobacco has damaged their health intended to quit compared to those who did not feel that way (adjusted OR = 5.62, 95% CI = 3.53-8.96). More numbers of users exposed to anti-tobacco messages in newspapers/magazines (adjusted OR = 1.76, 95% CI = 1.02-3.03), restaurants (adjusted OR = 2.47, 95% CI = 1.37-4.46), radio (adjusted OR=4.84, 95% CI = 3.01-7.78), cinema halls (adjusted OR = 9.22, 95% CI = 5.31-15.75), and public transportation (adjusted OR = 10.58, 95% CI = 5.90-18.98) intended to quit compared to unexposed users.

CONCLUSION: Anti-tobacco messages have positive influence on user's intentions to quit.

PMID: 23442409 [PubMed - indexed for MEDLINE]


Abstract

The tobacco epidemic is an increasing threat to public health with the tobacco burden particularly high in WHO's South-East Asia Region (SEAR). The Region has many obstacles to tobacco control, but despite these challenges, significant progress has been made in many countries. Although much work still needs to be done, SEAR countries have nevertheless implemented strong and often innovative tobacco control measures that can be classified as "best practices," with some setting global precedents. The best practice measures implemented in SEAR include bans on gutka, reducing tobacco imagery in movies, and warning about the dangers of tobacco. In a time of scarce resources, countries in SEAR and elsewhere must ensure that the most effective and cost-efficient measures are implemented. It is hoped that countries can learn from these examples and as appropriate, adapt these measures to their own specific cultural, social and political realities.

PMID: 23442393 [PubMed - indexed for MEDLINE]

Abstract

CONTEXT: Tobacco use is one of the leading preventable causes of death globally. Mass media plays a significant role in initiation as well as in control of tobacco use.

AIMS: To assess the effect of viewing anti-tobacco audiovisual messages on knowledge and attitudinal change towards tobacco use.

SETTINGS AND DESIGN: Interventional community-based study.

MATERIALS AND METHODS: A total of 1999 cinema attendees (age 10 years and above), irrespective of their smoking or tobacco using status, were selected from four cinema halls (two urban, one semi-urban, and one rural site). In pre-exposure phase 1000 subjects and in post-exposure phase 999 subjects were interviewed using a pre-tested questionnaire. After collecting baseline information, the other days were chosen for screening the audiovisual spots that were shown twice per show. After the show, subjects were interviewed to assess its effect.

STATISTICAL ANALYSIS USED: Proportions of two independent groups were compared and statistically significance using chi-square test was accepted if error was less than 0.05%.

RESULTS: Overall 784 (39.2%) subjects were tobacco users, 52.6% were non-tobacco users and 8.2% were former tobacco users. Important factors for initiation of tobacco use were peer pressure (62%), imitating elders (53.4%) and imitating celebrity (63.5%). Tobacco users were significantly less likely than non-tobacco users to recall watching the spots during movie (72.1% vs. 79.1%). Anti-tobacco advertisement gave inspiration to 37% of subjects not to use tobacco. The celebrity in advertisement influenced the people's attention. There was significant improvement in knowledge and attitudes towards anti-tobacco legal and public health measures in post exposure group.

CONCLUSIONS: The anti-tobacco advertisements have been found to be effective in enhancing knowledge as well as in transforming to positive attitude of the people about tobacco use.

PMID:23293436[PubMed] PMCID:PMC3531015

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Abstract

The objective of this study was to determine the efficacy of community-based group intervention for tobacco cessation. We recruited 400 men (20-40 years) currently using any form of tobacco from 20 villages of the Indian State of Tamil Nadu and randomized them equally into intervention and control groups. A physician offered two sessions of health education 5 weeks apart along with self-help material on tobacco cessation to the intervention group. The control group received only self-help material. The contents of the sessions included tobacco-related health problems, benefits of quitting, and coping strategies for withdrawal symptoms. Follow-up data were available for 92%. Self-reported point prevalence abstinence of 12.5% in the intervention group was significantly higher than the 6.0% in the control group at 2 months. Community-based group intervention has the potential to increase the coverage of tobacco cessation services for men in rural Tamil Nadu.

PMID: 22154037 [PubMed - indexed for MEDLINE]

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254 An annotated bibliography of scientific studies done on tobacco topic in WHO South-East Asia Region countries

Abstract not available

PMID:22916349[PubMed - indexed for MEDLINE]


Abstract

The burden of tobacco-related morbidity and mortality in India is substantial, with smokeless tobacco being the predominant form of tobacco use. Use of smokeless tobacco (for example gutkha, paan, khaini, and pan masala) is linked to a host of socioeconomic and cultural factors including gender, regional differences, educational level, and income disparities. Given the scale of the problem, a national social marketing campaign was developed and implemented. The creative approach used testimonials from a surgeon and patients at Tata Memorial Hospital in Mumbai. The communication message approach was designed to reflect the realities of disfiguring, disabling, and fatal cancers caused by smokeless tobacco. Evaluation of the campaign identified significant differences across a range of campaign behavioral predictors by audience segments aware of the campaign versus those who were "campaign unaware". Significant findings were also identified regarding vulnerable groups by gender (female/male) and rural/urban disparities. Findings are discussed in relation to the powerful impact of using graphic, emotive, and testimonial imagery for tobacco control with socially disadvantaged groups.

PMID:22350861[PubMed - indexed for MEDLINE]


Abstract

Tobacco use is one of the major risk factors for non-communicable diseases, with a profound impact on resource-poor low-income and middle-income countries such as India, where tobacco use is high and where socioeconomic as well as health inequalities are rampant. Effective implementation of the Framework Convention on Tobacco Control requires multisectoral efforts that can fructify through integration of tobacco control into broader health and development agendas such as food and water security, environment, the right to education and human rights. The global tobacco control community will need to explore innovative partnerships beyond its traditional confines and build a global coalition that supports tobacco control by partnering with others having convergent concerns on common determinants. A firm political commitment and intersectoral coordination between government and non-government agencies is paramount in order to implement effective tobacco control programmes. Integration of tobacco control into other health and development agendas as described in this paper has the potential to contribute to the achievement of all the eight United Nations Millennium Development Goals. This paper explores why the whole of government should accord a high priority to tobacco control, and how this integration could be achieved.

PMID: 22345268 [PubMed - indexed for MEDLINE]


Abstract

Pictorial warnings are effective in promoting smoking cessation as shown by research in the developed countries. This study aims to determine perceptions of Indians about the effectiveness of pictorial health warnings on tobacco packs which existed from May 31, 2009, to December 1, 2011. A cross-sectional survey was undertaken in five states of India with 1897 participants (56% males; 54% tobacco users). More tobacco users expressed that the pictorial warnings are inadequate to convey the health impact of tobacco use when compared with nonusers (71.50% vs. 62.75%; P < 0.001). More illiterates when compared with literates expressed their concern that the current pictorial warnings will not motivate them to quit (61.17% vs. 51.01%; P < 0.001). The new
warnings implemented from December 1, 2011, in India are also not field-tested. Field testing and assessment of
effectiveness of health warnings should be a mandatory requirement for Parties reporting on Article 11 of
Framework Convention on Tobacco Control (FCTC).

PMID: 22684176 [PubMed - indexed for MEDLINE]

Murukutla N, Turk T, Prasad CV, et al. Results of a national mass media campaign in India to warn against

Abstract

OBJECTIVE: Smokeless tobacco consumption in India is a significant source of morbidity and mortality. In order
to educate smokeless tobacco users about the health harms of smokeless tobacco and to denormalise tobacco
usage and encourage quitting, a national television and radio mass media campaign targeted at smokeless
tobacco users was aired for 6 weeks during November and December 2009.

METHODS: The campaign was evaluated with a nationally representative household survey of smokeless
tobacco users (n = 2898). The effect of campaign awareness was assessed with logistic regression analysis.

RESULTS: The campaign affected smokeless tobacco users as intended: 63% of smokeless-only users and
72% of dual users (i.e., those who consumed both smoking and smokeless forms) recalled the campaign
advertisement, primarily through television delivery. The vast majority (over 70%) of those aware of the campaign
said that it made them stop and think, was relevant to their lives and provided new information. 75% of
smokeless-only users and 77% of dual users said that it made them feel concerned about their habit. Campaign
awareness was associated with better knowledge, more negative attitudes towards smokeless tobacco and
greater cessation-oriented intentions and behaviours among smokeless tobacco users.

CONCLUSIONS: Social marketing campaigns that utilise mass media are feasible and efficacious interventions
for tobacco control in India. Implications for future mass media tobacco control programming in India are
discussed.

PMID: 21508418 [PubMed - indexed for MEDLINE]

World Health Organization, Regional Office for South-East Asia. Regional strategy for utilization of tobacco

Summary

This Regional Strategy for Utilization of Tobacco Questions for Surveys (TQS) essentially provides a strategic
direction to use a standard set of questions on tobacco use among adults and other key tobacco control
measures in Member States of the Region. Implementation of TQS will result in generating consistent and
comparable tobacco information across the Member countries, and will support in improving the existing tobacco
control policies and programmes in the Region.

World Health Organization, Regional Office for South-East Asia. Regional Strategy for tobacco control. New
Delhi: WHO SEARO; 2012

Summary

This Regional Strategy for Tobacco Control primarily provides a longer-term strategic guidance to Member States
of the South-East Asia Region to support them in formulating evidence-based policies and designing a sustained
and cost-effective programme on tobacco control to counter successfully the rising public health concerns of
tobacco use in the Region. The Region is home to around 250 million smokers and nearly the same number of
smokeless tobacco users. About 1.3 million deaths occur every year, including around 160 000 deaths due to
exposure to second-hand smoke. The increasing trend of tobacco use and its devastating effects pose a grave
threat to the health and well-being of the people of the Region. Thus, the implementation of the Regional Strategy
is expected to eventually protect the people of the Region from the enormous negative health, social, economic and environmental consequences of tobacco consumption and exposure to tobacco smoke.

World Health Organization. Regional Office for South–East Asia Profile on implementation of WHO framework convention on tobacco control in the South-East Asia Region: Tobacco Kit. New Delhi: WHO SEARO; 2011.

Summary

This profile on the implementation of the WHO Framework Convention on Tobacco Control in the South-East Asia Region provides an overview of the status of the implementation of the convention in the eleven Member States of the SEA Region. It highlights some major milestones achieved as well as the challenges faced while implementing tobacco control measures in Member countries.


Summary

Smokeless tobacco consumption in the South-East Asia Region is a growing threat to health. The region is a hub for smokeless tobacco production and use. This category of tobacco product is manufactured in various forms. The diversity of these tobacco products, their availability and affordability make them obvious alternatives to the relatively more expensive cigarettes. However, the dangers and risks associated with smokeless tobacco are not well understood by the population. Smokeless tobacco is not perceived as an urgent threat in many of the Member countries and consequently, tobacco control efforts for this type of tobacco use are not intense. The tobacco control agenda needs to keep up the pressure and apply a wider approach and holistic strategies to address this issue. To this end, the "Expert Group Meeting on Smokeless Tobacco Control and Cessation" was convened in New Delhi, India, on 16-17 August 2011. The meeting allowed experts to share information, identify the next steps on smokeless tobacco control and cessation, and provide inputs to a policy paper to be published later. This report compiles the issues faced by Member States concerning smokeless tobacco and provides recommendations to policy-makers and stakeholders.


Abstract

Tobacco use is the single most preventable cause of death and disability. Tobacco use causes almost one million deaths annually in India, which is much more than the combined mortality due to malaria/TB and HIV/AIDS. It is estimated to cause one billion deaths in the 21st century, eighty per cent of which will occur in the developing countries like India. Tobacco use is increasing in the country. Global Adult Tobacco Survey, 2010, estimated that more than one-third of adults (35%) in the country use tobacco, out of which 21% use smokeless tobacco, 9% smoke and 5% use both. The prevalence of overall tobacco use among men was 47.9% and among women was 20.2%. Global Youth Tobacco Survey, India, 2009, estimate 14.6% of 13-15 years school going children use tobacco. There is urgent need for addressing the tobacco epidemic in India. Though effective interventions for tobacco cessation such as brief counselling, nicotine replacement therapy, non-nicotine pharmacotherapy are available, their use by general practitioners is restricted due to lack of adequate dissemination of information in their use. Use of these simple assessment tools and practice of these effective interventions by general medical and healthcare practitioners will go a long way in addressing the rising tobacco epidemic in India and making general healthcare more comprehensive.

PMID: 23469577 [PubMed - indexed for MEDLINE]

Abstract

Tobacco use is a major public health challenge in India with 275 million adults consuming different tobacco products. Government of India has taken various initiatives for tobacco control in the country. Besides enacting comprehensive tobacco control legislation (COTPA, 2003), India was among the first few countries to ratify WHO the Framework Convention on Tobacco Control (WHO FCTC) in 2004. The National Tobacco Control Programme was piloted during the 11th Five Year Plan which is under implementation in 42 districts of 21 states in the country. The advocacy for tobacco control by the civil society and community led initiatives has acted in synergy with tobacco control policies of the Government. Although different levels of success have been achieved by the states, non prioritization of tobacco control at the sub-national level still exists and effective implementation of tobacco control policies remains largely a challenge.

PMID:22089690[PubMed - indexed for MEDLINE]


Abstract

Antitobacco mass media campaigns have had good success at changing knowledge, attitudes, and behaviors with respect to smoking in high-income countries provided they are sustained. Mass media campaigns should be a critical component of tobacco control programs in low- and lower-middle-income countries. Mounting evidence shows that graphic campaigns and those that evoke negative emotions run over long periods of time have achieved the most influence. These types of campaigns are now being implemented in low- and middle-income countries. The authors provide 3 case studies of first-ever graphic warning mass media campaigns in China, India, and Russia, 3 priority high-burden countries in the global Bloomberg Initiative to Reduce Tobacco Use. In each of these countries, message testing of core messages provided confidence in messages, and evaluations demonstrated message uptake. The authors argue that given the initial success of these campaigns, governments in low- and middle-income countries should consider resourcing and sustaining these interventions as key components of their tobacco control strategies and programs.

PMID:21916713[PubMed - indexed for MEDLINE]


Abstract

BACKGROUND: Second-hand smoke contains several toxic chemicals that are known to pollute the air and harm people's health. In India, smoking in public places has been prohibited since October 2008 as a way to reduce second-hand smoke (SHS) exposure. The purpose of the present study was to assess the implementation of smoke-free policies and its impact on indoor air quality by measuring the PM (2.5) levels in bars and restaurants, restaurants, country liquor bars, hookah restaurants and pubs in Mumbai.

MATERIALS AND METHODS: Air quality measurements at 50 venues were conducted by using a "SIDEPAK (™) AM510 Personal Aerosol Monitor" during April to May 2009. Average concentration of PM (2.5) (mg/m (3)) particles was calculated separately for each venue.

RESULTS: Smoking was observed in 36% of the surveyed venues during an hour of data collection. The PM (2.5) levels ranged from 16.97 to 1101.76 mg/m (3). The average level of PM (2.5) among non-smoking venues was 97.19 mg/m (3) and among smoking venues was 363.04 mg/m (3).

CONCLUSION: Considerable scope for improvement in implementation of smoke-free policies exists. The PM (2.5) levels were exceedingly high in venues where smoking was observed.
Abstract

Tobacco smoking and exposure to secondhand tobacco smoke are associated with disability and premature mortality in low and middle-income countries. The aim of this study was to assess the cost-effectiveness of implementing India's Prohibition of Smoking in Public Places Rules in the state of Gujarat, compared to implementation of a complete smoking ban. Using standard cost-effectiveness analysis methods, the cost of implementing the alternatives was evaluated against the years of life saved and cases of acute myocardial infarction averted by reductions in smoking prevalence and secondhand smoke exposure. After one year, it is estimated that a complete smoking ban in Gujarat would avert 17,000 additional heart attacks and gain 438,000 life years (LY). A complete ban is highly cost-effective when key variables including legislation effectiveness were varied in the sensitivity analyses. Without including medical treatment costs averted, the cost-effectiveness ratio ranges from $2 to $112 per LY gained and $37 to $386 per acute myocardial infarction averted. Implementing a complete smoking ban would be a cost saving alternative to the current partial legislation in terms of reducing tobacco-attributable disease in Gujarat.

Abstract

Smoke-free initiatives have gained significant momentum since India enacted comprehensive smoke-free legislation in October 2008. The International Union Against Tuberculosis and Lung Disease has actively supported various levels of government, legislators, civil society, and communities across the country to implement smoke-free public places and comply with the law. On World No Tobacco Day 2010, four jurisdictions demonstrated that public places within their jurisdictions were smoke-free. These jurisdictions cover a wide spectrum of demographic and geographic variation and include an entire state. The demonstration of being ‘smoke-free’ in these jurisdictions was supported by a simple survey that documented compliance with the smoke-free law in the country.

Abstract

BACKGROUND: Air nicotine monitoring is an established method of measuring exposure to second hand smoke (SHS). Not much research has been done in India to measure air nicotine for the purpose of studying exposure to SHS. It is a risk factor and many diseases are known to occur among non smokers if they are exposed to second hand smoke.

OBJECTIVE: To conduct monitoring of air nicotine for second hand smoke exposure in public places across major cities in India.

MATERIALS AND METHODS: A cross sectional survey was conducted across four cities across the country, using passive air monitoring. The buildings included hospitals, secondary schools, Governmental offices, bars and restaurants. The buildings were selected through convenience sampling method keeping in view specific sentinel locations of interest.
**RESULT:** The presence of air nicotine was recorded in most of the buildings under the study, which included government buildings, hospitals, schools, restaurants and entertainment venues (bars) in all four cities under the study. The highest median levels of air nicotine were found in entertainment venues and restaurants in cities.

**CONCLUSION:** The presence of air nicotine in indoor public places indicates weak implementation of existing smoke free law in India. The findings of this study provide a baseline characterization of exposure to SHS in public places in India, which could be used to promote clean indoor air policies and programs and monitor and evaluate the progress and future smoke-free initiatives in India.

**KEYWORDS:** Air nicotine; passive air monitoring; second hand smoke (SHS); smoking; tobacco smoke

PMID:21976792[PubMed] PMCID:PMC3180954

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**Arora M, Stigler MH, Reddy K. Effectiveness of health promotion in preventing tobacco use among adolescents in India: research evidence informs the National Tobacco Control Programme in India. Glob Health Promot. 2011 Mar;18(1):9-12.**

**Abstract**

This case study has two aims. First, it describes intervention strategies from two school-based programs designed to prevent tobacco use among adolescents in India. Second, it explains how evidence from randomized controlled trials of these intervention programs was used by a local non-governmental organization in Delhi to advocate for scaling up the Government of India's tobacco control efforts to include school health interventions as one of the components of India's National Tobacco Control Program. This case study illustrates the need for developing countries to conduct rigorous evaluation in order to provide context-relevant evidence prior to scaling up interventions.

PMID: 21721292 [PubMed - indexed for MEDLINE] PMCID: PMC3132087

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**Arora, M, Yadav, A. Pictorial health warnings on tobacco products in India: Socio-political and legal developments. The National Medical Journal of India 2010; 23:357-359.**


**Abstract**

**AIMS:** The aims of this study are to describe the tobacco dependence treatment systems in five countries at different stages of development of their systems, and from different income levels and regions of the world, and to draw some lessons from their experiences that might be useful to other countries. **METHODS AND DATA SOURCES:** Data were drawn from an earlier survey of treatment services led by M.R. and A.M., from Party reports to the Secretariat of the Framework Convention on Tobacco Control, and from correspondents in the five countries. These data were entered onto a standard template by the authors, discussed with the correspondents to ensure they were accurate and to help us interpret them, and then the templates were used as a basis to write prose descriptions of the countries' treatment systems, with additional summary data presented in tables.

**RESULTS:** Two of the middle-income countries have based their treatment on specialist support and both consequently have very low population coverage for treatment. Two countries have integrated broad-reach approaches, such as brief advice with intensive specialist support; these countries are focusing currently upon monitoring performance and guaranteeing quality. Cost is a significant barrier to improving treatment coverage and highlights the importance of using existing infrastructure as much as possible.

**CONCLUSIONS:** Perhaps not surprisingly the greatest challenges appear to be faced by large, lower-income countries that have prioritized more intensive but low-reach approaches to treatment, rather than developing basic infrastructure, including brief advice in primary care and quitlines.

PMID: 20712821 [PubMed - indexed for MEDLINE]
An annotated bibliography of scientific studies done on tobacco topic in WHO South-East Asia Region countries


Abstract

Tobacco use is a major cause of preventable death and disease in India. Unfortunately, very few people in India quit tobacco use. Lack of awareness of harm, ingrained cultural attitudes, and lack of support for cessation maintains tobacco use in the community. The significant addictive property of nicotine makes quitting difficult and relapse common. Health professionals have received little training, and very few thus carry out proper assessments and interventions among tobacco users. Evidence from the developed countries suggests that brief interventions delivered by diverse health professionals are effective in tobacco cessation. Combining pharmacologic approaches with behavioral counseling produces better results than a single strategy. In India, early experiences with tobacco cessation occurred in the context of primary community education for cancer control. More recently, tobacco cessation clinics have been set up to develop models of intervention, and train health professionals in service delivery. These need to be expanded at the primary, secondary, and tertiary care levels, and cost-effective community tobacco cessation models need to be developed. Tobacco cessation forms one of the critical activities under the National Tobacco Control Program. Tobacco cessation needs to be urgently expanded by training health professionals in providing routine clinical interventions, increasing availability and subsidy on pharmacotherapy, developing wide-reaching strategies, such as quitlines and cost-effective strategies, such as group interventions.

PMID: 20622418 [PubMed - indexed for MEDLINE]


Abstract

'The Cigarettes and Other Tobacco Products (Prohibition of Advertisement and Regulation Trade and Commerce, Production, Supply and Distribution) Act, 2003,' known as COTPA in short, was enacted by the Government of India to control the tobacco menace. One of the successful strategies adopted by the government of Tamilnadu for implementing this Tobacco Control Act was the concept of 'Smoke-free educational institutions'. The process for having smoke-free educational institutions was started by the NGOs motivating the school authorities, to ensure that the set of guidelines, which were devised based the COPTA Act, was followed. The institution was later certified as a smoke-free institution, after verification by the government. The role of the stakeholders and the challenges we faced are discussed in this article.

PMID: 20622443 [PubMed - indexed for MEDLINE]


Abstract

The 3 aims of Project Quit Tobacco International are to design a tobacco curriculum for medical colleges, develop culturally appropriate approaches to clinic and community-based tobacco cessation, and to build tobacco research and training networks within India and Indonesia as a prototype for other countries. This article describes pilot interventions being launched in 10 medical colleges in these 2 countries to (a) integrate tobacco into their 4-year training programs, (b) establish illness-specific cessation clinics, and (c) involve colleges in community outreach efforts to promote smoke-free households. This article reports on lessons learned, challenges faced, and successes realized to date.

PMID: 20566552 [PubMed - indexed for MEDLINE]

Comment on

- Cancer control in India- A sorry state. [Indian J Cancer. 2009]

PMID: 20622426 [PubMed - indexed for MEDLINE]

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Abstract

BACKGROUND: Tobacco use is a major public health problem in India. The Cigarettes and Other Tobacco Products Act (COTPA) was developed to curb this epidemic. Because no study has been conducted on the awareness, attitude and perceived barriers regarding the implementation of COTPA, this study was undertaken.

MATERIALS AND METHODS: A community-based cross-sectional survey was conducted among 300 adults (mean age 41 years, 52% men) selected by cluster sampling method from Guwahati Municipal Corporation. Information on awareness, attitude and their predictors and barriers for implementation was collected using a pretested, structured interview schedule. Multivariate analysis was done using SPSS.

RESULTS: Adults older than 50 years were 3 times (odds ratio [OR] 3.02, 95% CI 1.44-6.31) and those with more than 10 years of schooling were 4 times (OR 3.60, 95% CI 1.70-7.70) more likely to have good awareness of COTPA compared with their counterparts. Those belonging to the middle socioeconomic status (SES) were 3 times (OR 3.36, 95% CI 1.13-10.01), those who reported secondhand smoking harmful were 3 times (OR 3.32, 95% CI 1.45-7.62), and those with more than 10 years of schooling were 3 times (OR 2.92, 95% CI 1.01-8.45) more likely to have positive attitude toward COTPA compared with their counterparts. Lack of complete information and awareness of the Act, public opposition, cultural acceptance of tobacco use, lack of political support, and less priority for tobacco control were reported as barriers for COTPA implementation.

CONCLUSION: Efforts should be made to increase the awareness of COTPA focusing on younger population, less educated, and those belonging to the low SES.

PMID: 20622417 [PubMed - indexed for MEDLINE]

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Abstract

BACKGROUND: The Indian government enacted 'The cigarettes and other tobacco products act, 2003' (COTPA), which prohibits smoking in public places.

AIM: To validate the efficacy of the Act of 2003, enacted by the Government of India, to prevent secondhand smoking in public places.

SETTINGS AND DESIGN: The study is based on a non-random sample survey of 2,600 bus passengers carried out in the premises of three mega public road transport organizations in Karnataka state, India, in June 2007.

METHODS AND MATERIAL: The information was gathered through administration of structured schedules. A sample of 1,000 each for the terminus of Bangalore Metropolitan Transport Corporation (BMTC) and Kamataka State Road Transport Corporation (KSRTC) in Bangalore and, 600 for North West Karnataka Road Transport Corporation (NWKRTC) in Hubli-Dharwad city was distributed proportionately according to the number of platforms in each terminus.

STATISTICAL ANALYSIS USED: Simple Averages.

RESULTS: There is some reduction in smoking in general as perceived by 69% of the passengers as compared to the scenario a year before the enactment of COTPA. The observed smoking is lower in the bus premises of BMTC where there is strict regulation, and higher in the bus premises of NWKRTC, which has not taken any regulatory measures.
CONCLUSIONS: Knowing smoking is banned in public places can itself create awareness depending on the coverage extended by media and implementing an agency to reach the public. The implementation of an act depends on the willingness of stakeholders to act upon it. The implementation of COTPA as done by BMTC could well become a role model for replication elsewhere, if BMTC can strive harder to accomplish a 100% smoke-free zone.

PMID: 20622410 [PubMed - indexed for MEDLINE]


Abstract

Beginning with the Cigarettes Act, 1975, a number of legislative strategies and programs to curb tobacco use have been implemented in India, with limited success. Currently, the Cigarettes and Other Tobacco Products Act, 2003, is designed to curb the use of tobacco in order to protect and promote public health. This review presents a critical appraisal of the current situation in its historical context.

PMID: 20622419 [PubMed - indexed for MEDLINE]


Abstract

The 2003 India Tobacco Control Act (ITCA) includes provisions designed to reduce tobacco consumption and protect citizens from exposure to secondhand smoke. India ratified the World Health Organization Framework Convention on Tobacco Control (WHO FCTC) on February 27, 2005. The WHO FCTC is the world's first public health treaty that aims to promote and protect public health and reduce the devastating health and economic impact of tobacco. The Global Health Professions Student Survey (GHPSS) was developed to track tobacco use among third-year dental, medical, nursing, and pharmacy students across countries. Data from the dental (2005), medical (2006), nursing (2007), and pharmacy (2008) GHPSS conducted in India showed high prevalence of tobacco use and a general lack of training by health professionals in patient cessation counseling techniques. The Ministry of Health and Family Welfare could use this information to monitor and evaluate the existing tobacco control program effort in India as well as to develop and implement new tobacco control program initiatives.

PMID: 20622411 [PubMed - indexed for MEDLINE]


No abstract available

PMID: 20169396 [PubMed - indexed for MEDLINE]

Abstract

BACKGROUND: The Government of India issued an undertaking in the Supreme Court mandating pictorial health warnings (PHWs) on packages of tobacco products from 31st May, 2009 under "Cigarettes and Other Tobacco Products Act" (COTPA) guidelines. This constitutes a key economic channel for educating people on devastating health impacts of deadly products within in a vivid and memorable way. Few studies have investigated PHWs on tobacco products marketed in India.

OBJECTIVES: To assess met guidelines for pictorial health warnings under packaging and labeling rules on packages of collected tobacco products specified by COTPA.

MATERIALS AND METHODS: Snowball/network sampling design was followed to obtain samples of 37 different tobacco brands, 18 in smoking form (12 cigarette, 6 bidi brands) and 19 in smokeless form (4 chewing tobacco, 11 Gutka and 4 Khaini brands) marketed at retail outlets at Muradnagar. They were analyzed for their compliance with guidelines through checklist by one calibrated examiner.

RESULTS: PHWs were absent on packages of 5 tobacco brands. Fifteen tobacco brands had PHWs smaller than stipulated 40% of principal display area; 6 brands of bidis had PHWs on deceptive backgrounds, 3 of which were placed on a curved axis. Misleading descriptors and promotional messages were also present.

CONCLUSION: Locally marketed tobacco products were not compliant with packaging and labeling rules specified by COTPA. This highlights the need for more stringent implementation of COTPA guidelines to combat the ever-growing tobacco menace.

PMID: 20843148 [PubMed - indexed for MEDLINE]


Abstract

BACKGROUND: Tobacco use is the cause of immense burden on our nation in terms of mortality and morbidity, being the single leading cause of preventable illnesses and death. Smoking cessation interventions in our country will be the most cost effective of all interventions considering that the cost incurred on the three main tobacco related illnesses (COPD, CAD, and Cancer) being around Rs 27,761 crore in the year 1999. MATRIALS AND METHODS: A double blind placebo controlled trial was conducted to see the efficacy of Bupropion in smoking cessation. Smokers with current depression were excluded. The subjects (n = 30) were randomly assigned to receive Bupropion SR 300 mg/day or placebo for seven weeks. Target quit date was preferentially 8(th) day of starting the treatment. Intensive counseling was provided by the physician at the baseline and brief counseling at every visit weekly during the treatment phase and at weeks 12 and 16. Self reported abstinence was confirmed by a carbon monoxide concentration in expired air of less than 10 ppm.

RESULTS: The seven-day point prevalence abstinence rate at the end of week 2 and week 16 in the drug group was 46.67% and 53.33 % respectively and in the placebo group was 13.33% and 20% respectively with the ‘P’ value of 0.04 and 0.05 respectively. Rates of continuous abstinence at weeks 4, 7 and 16 were 46.67%, 40% and 33.33% in the drug group and 13.33%, 13.33% and 13.33% in the placebo group respectively. The rates were significantly higher in the drug group till week 4 starting from week 2 of the treatment phase. The mean weight gain in drug group was found to be significant less as compared to the placebo at week 16 (P = 0.025) The mean change of depression scores from the baseline was not significantly different between the two groups at any point of time. The withdrawal symptom score increase from the baseline was not significantly higher at any point of time in the drug group but in the placebo group the increase was significantly higher for seven days after target
quit date and at weeks 3 and 4 (P < 0.05). The most common adverse events in the drug group were insomnia, which was seen in 6 (40%) patients and dry mouth and/or altered taste in 4 (26.67%) patients, which was significantly higher as compared to placebo. PREDICTORS OF OUTCOME: The univariate predictors of a successful outcome were the point prevalence abstinence at week 16 were older age (>40 years), (P = 0.044) and quitter status at week 2 (P = 0.001). Multivariate predictors in order of importance were Quit status at 2nd week (P = 0.002) and Age >40 years (P = 0.031). The combined predictive value of these two variables was found to be 86.3%.

CONCLUSIONS: Bupropion helps in smoking cessation. This has been proved by three large multicenter randomized controlled trials. This study has also reflected the same result in the form of significantly high seven-day point prevalence abstinence at week 16 in the Bupropion group as compared to placebo. Bupropion has a beneficial effect on weight gain and withdrawal symptoms and the benign adverse effects of insomnia and dry mouth or altered taste make it a very effective and cheap treatment for nicotine addiction in smokers.

PMID:20539765[PubMed] PMCID:PMC2878706


Summary

This strategy sets out the objectives and priority activities for resource mobilization for 2010-2011 to ensure effective implementation of the Strategic Action Plan for Tobacco Control in South-East Asia Region. It provides strategic approaches and guidance on the major steps for resource mobilization highlighting the process of assessment for resource requirement and the potential for raising it; analysis of donor intelligence, building alliance and carrying out advocacy. It emphasizes on the need to diversify funding sources for sustainable financing to the programme and also on the importance of realistic programme development and management of resources.


Summary

Tobacco Cessation: A Manual for Nurses, Health Workers and other Health Professionals is a comprehensive manual on tobacco cessation. It provides a detailed overview of the extent and patterns of use of tobacco products in the South-East Asia (SEA) Region and the related health burden. Among the top 10 countries globally with the highest levels of tobacco use among males, as many as three are from the SEA Region. The Manual highlights the need to provide tobacco cessation interventions by nurses, health workers and other health professionals, and graphically depicts the adverse health effects of tobacco on almost all organs of the human body. In the section on interventions, the Manual reiterates that tobacco cessation efforts start with the successful identification of tobacco use. It provides effective tools and techniques for tobacco cessation interventions, including visits and follow-up of patients, listing of pros and cons, worksheets, group-based interventions and pharmacotherapy. Apart from the usual methods of cessation such as tapering off and abrupt cessation ('cold turkey'), the Manual also lists new and innovative interventions such as the 'Recovery Calendar'. Above all, the Manual highlights the importance of recognizing the dangerous effects of tobacco use, the benefits of quitting and the need to provide effective follow-up to prevent 'lapses' and 'relapses'. It includes a series of succinct, ready-to-use methods, counselling techniques and model motivational tools that can be practiced by the health professional to promote tobacco cessation.


Summary

Helping People Quit Tobacco: A Manual for Doctors and Dentists is a comprehensive dossier on tobacco cessation with the help of intervention from doctors and dentists. The document begins with the premise that the
core responsibility of any doctor or dentist includes reducing the use of tobacco among his patients and in the community, and encouraging tobacco cessation. The importance of the TEACH tool to meet the MPOWER goals of the World Health Organization are also enunciated. The Manual cites relevant statistics from the apex global tobacco surveys to highlight the extent and enormity of the tobacco epidemic in the South-East Asia Region, and also outlines the nature of harm caused by tobacco use, its inherent links with several debilitating diseases and the manifold risks of using smoking and smokeless tobacco products. The Manual encourages doctors and dentists to identify at the earliest possible stage tobacco use in a patient, and provides step-by-step guidelines on intervention and assisted cessation through counselling, motivational tools and medication or pharmacotherapy. A concluding section provides details on ‘lapse’ and ‘relapse’ and how to overcome the same.


Summary

Reducing the use of tobacco is a complex task as it involves enormous socio-cultural and health dimensions. It requires a multi-sectoral and integrated approach that includes consistent and continuous communication for behavioural and social change. Communication as such, is a strategic process to influence individual and group behaviour that needs systematic planning and implementation. This document tends to define the framework and the key elements of communication for tobacco control to be used in the Member States of the South-East Asia Region. It focuses on the major approaches of communication and guiding principles for planning and using the communication components for designing the effective communication for tobacco control programme. It suggests a model for communication planning based on communication objectives, target groups and potential barriers which determines the communication approach, message development and selection of media. It emphasizes on the importance of using media mix, partnership, capacity building and regular evaluation of communication activities.


Abstract

BACKGROUND: Tobacco use is highly prevalent and culturally accepted in rural Maharashtra, India.

AIMS: To study the knowledge, attitude, and practices (KAP) regarding tobacco consumption, identify reasons for initiation and continuation of tobacco use, identify prevalence of tobacco consumption and its relation with different precancerous lesions, provide professional help for quitting tobacco, and develop local manpower for tobacco cessation activities. SETTINGS, DESIGN, METHODS AND MATERIAL: The present study was conducted for one year in a chemical industrial unit in Ratnagiri district. All employees (104) were interviewed and screened for oral neoplasia. Their socio-demographic features, habits, awareness levels etc. were recorded. Active intervention in the form of awareness lectures, focus group discussions, one-to-one counseling and, if needed, pharmacotherapy was offered to the tobacco users.

RESULTS: All employees actively participated in the program. Overall, 48.08% of the employees were found to use tobacco, among which the smokeless forms were predominant. Peer pressure and pleasure were the main reasons for initiation of tobacco consumption, and the belief that, though injurious, it would not harm them, avoiding physical discomfort on quitting and relieving stress were important factors for continuation of the habit. Employees had poor knowledge regarding the ill-effects of tobacco. 40% of tobacco users had oral precancerous lesions, which were predominant in employees consuming smokeless forms of tobacco.

CONCLUSIONS:

Identifying reasons for initiation and continuation of tobacco consumption along with baseline assessment of knowledge, attitudes, and practices regarding tobacco use, are important in formulating strategies for a comprehensive workplace tobacco cessation program.

PMID: 20386628 [PubMed] PMCID: PMC2847335

Abstract not available


PMCID: P PMCID: PMC2778080


Abstract

Tobacco use is one of the leading preventable causes of illness and death. The most powerful predictor of adult smoking is smoking during adolescence. While general and pediatric dentists have a positive attitude regarding tobacco cessation counseling, the same is not extrapolated into practice. Several barriers to counseling in the dental clinic have been identified and research into some of these has been conducted. Evidence-based cessation programs are still in the nascent stage, but this should not hinder dental professionals from rendering these services to the child and adolescent populations. Brief interventions, self-help materials, and nicotine replacement therapy for established nicotine dependence form the mainstay of therapy. The purpose of this paper is to identify the several barriers encountered in providing cessation and discuss the current status of its implementation in the dental clinic.

PMID: 19736499 [PubMed - indexed for MEDLINE]


Abstract

Tobacco imposes a colossal burden of disease and death leading to catastrophic health, social, economic and environmental effects. Prevalence and practices of tobacco use in India are varied and disparate. Tobacco consumption continues to grow at 2-3% per annum, and by 2020 it is predicted that it will account for 13% of all deaths in the country. India is now demonstrating a steady resolve to contain the menace of tobacco through a comprehensive control strategy that combines several demand and supply reduction measures. India's anti-tobacco legislation, first passed at the national level in 1975, was largely limited to health warnings and proved to be inefficient. The 'Cigarettes and Other Tobacco Products Bill, 2003' represented an advance in tobacco control. It included demand reduction measures like outlawing smoking in public places, forbidding sale of tobacco to minors, requiring more prominent health warning labels, and banning advertising at sports and cultural events. India, as a signatory to FCTC, is actively involved in combating the menace of tobacco with renewed fervor. There is a need to devise innovative methods of mobilizing financial and human resources for tobacco control, establish efficient national coordinating mechanisms, integrate tobacco control into health and development programs and periodically evaluate these activities. The Government must also introduce policies to raise taxes, control smuggling, close advertising loopholes, and create adequate provisions for the enforcement of tobacco control laws.

PMID: 19256780 [PubMed - indexed for MEDLINE]

**Summary**

Since 2007 the Bloomberg Global Initiative to Reduce Tobacco Use (BGI) is being implemented in the South-East Asia Region. Four countries from the Region - Bangladesh, India, Indonesia and Thailand - were selected as priority countries under the initiative. In 2007 both human and financial support was provided to these countries to strengthen their capacity for tobacco control. The WHO South-East Asia Region was the first and only Region to have organized an orientation workshop for all BGI staff. The workshop was found to be useful for the implementation of the Initiative in the Region. It has also enhanced the knowledge and team spirit of the whole BGI team and provided a unique opportunity to discuss and share the challenges that the Initiative is facing in terms of coordination for effective implementation. The workshop provided the platform to discuss and decide on a common approach to take the Initiative to its logical fruition.

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**Abstract**

**BACKGROUND:** India made 2 important policy statements regarding tobacco control in the past decade. First, the India Tobacco Control Act (ITCA) was signed into law in 2003 with the goal to reduce tobacco consumption and protect citizens from exposure to secondhand smoke (SHS). Second, in 2005, India ratified the World Health Organization Framework Convention on Tobacco Control (WHO FCTC). During this same period, India conducted the Global Youth Tobacco Survey (GYTS) in 2003 and 2006 in an effort to track tobacco use among adolescents.

**METHODS:** The GYTS is a school-based survey of students aged 13-15 years. Representative national estimates for India in 2003 and 2006 were used in this study.

**RESULTS:** In 2006, 3.8% of students currently smoked cigarettes and 11.9% currently used other tobacco products. These rates were not significantly different than those observed in 2003. Over the same period, exposure to SHS at home and in public places significantly decreased, whereas exposure to pro-tobacco ads on billboards and the ability to purchase cigarettes in a store did not change significantly.

**CONCLUSIONS:** The ITCA and the WHO FCTC have had mixed impacts on the tobacco control effort for adolescents in India. The positive impacts have been the reduction in exposure to SHS, both at home and in public places. The negative impacts are seen with the lack of change in pro-tobacco advertising and ability to purchase cigarettes in stores. The Government of India needs to consider new and stronger provisions of the ITCA and include strong enforcement measures.

PMID: 18611211 [PubMed - indexed for MEDLINE]

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**Abstract**

Portuguese introduced tobacco to India 400 years ago. Ever since, Indians have used tobacco in various forms. Sixty five per cent of all men and 33% of all women use tobacco in some form. Tobacco causes over 20 categories of fatal and disabling diseases including oral cancer. By 2020 it is predicted that tobacco will account for 13% of all deaths in India. A major step has to be taken to control what the World Health Organization, has labeled a ‘smoking epidemic' in developing countries. India's anti-tobacco legislation, first passed in 1975, was largely limited to health warnings and proved to be insufficient. A new piece of national legislation, proposed in 2001, represents an advance including banning smoking in public places, advertising and forbidding sale of
tobacco to minors. Preventing the use of tobacco in various forms as well as treating nicotine addiction is the major concern of dentists and physicians. The dental encounter probably constitutes a "teachable moment" when the patient is receptive to counseling about life- style issues. Both policy makers and health professionals must work together for achieving a smoke free society for our coming generations.

PMID:17347536[PubMed - indexed for MEDLINE]
PMID: 16723672 [PubMed - indexed for MEDLINE] PMCID: PMC2563550) (SEAR countries not mentioned in text)


**Summary**

As part of the General Obligations under Article 5 of the WHO Framework Convention on Tobacco Control (FCTC), each Party shall develop, implement and periodically update and review multisectoral national tobacco control strategies, plans of action and programmes in order to fully comply with the provisions of the Convention. In order to provide some general guidelines on how to develop these strategies and plans of action, the Regional Strategy for Tobacco Control and Regional Plan of Action for Tobacco Control were developed by the Regional Office. The Regional Strategy contains the vision and strategic plan for tobacco control in the WHO South-East Asia Region for the next five years (2006-2010). The Plan of Action was based on the Regional Strategy for Tobacco Control (2006-2010). While the Convention provides guidelines to reduce the harm from tobacco, definitive actions to control tobacco have to take place at the country level. The successful implementation of the FCTC provisions depends almost entirely on the ability of the countries. Some countries in the Region have already developed their national strategies and plans of action and others are in the process of doing so. These two documents would be helpful in revising the existing national strategies and plans of action in countries that have already developed the same to make them fully compatible with the WHO FCTC. The documents would also be helpful developing national strategies and plans of action by countries which have not yet done so.


**Summary**

As part of the General Obligations under Article 5 of the WHO Framework Convention on Tobacco Control (FCTC), each Party shall develop, implement and periodically update and review multisectoral national tobacco control strategies, plans of action and programmes in order to fully comply with the provisions of the Convention. In order to provide some general guidelines on how to develop these strategies and plans of action, the Regional Strategy for Tobacco Control and Regional Plan of Action for Tobacco Control were developed by the Regional Office. The Regional Strategy contains the vision and strategic plan for tobacco control in the WHO South-East Asia Region for the next five years (2006-2010). The Plan of Action was based on the Regional Strategy for Tobacco Control (2006-2010). While the Convention provides guidelines to reduce the harm from tobacco, definitive actions to control tobacco have to take place at the country level. The successful implementation of the FCTC provisions depends almost entirely on the ability of the countries. Some countries in the Region have already developed their national strategies and plans of action and others are in the process of doing so. These two documents would be helpful in revising the existing national strategies and plans of action in countries that have already developed the same to make them fully compatible with the WHO FCTC. The documents would also be helpful developing national strategies and plans of action by countries which have not yet done so.


No abstract available

PMID: 16130609 [PubMed - indexed for MEDLINE]


No abstract available

PMID:15704708[PubMed - indexed for MEDLINE]


**Sinha DN, Dobe M.** *Effectiveness of tobacco cessation intervention programs.* **Indian J Public Health.** 2004 Jul-Sep; 48(3):138-43.

**Abstract**

A study was conducted in selected districts of Bihar to evaluate the effectiveness of Intensive vs. Minimal, Community centered vs. Clinic/Camp centered and Mass/Group vs. Individual targeted intervention programs for cessation of tobacco use. Relevant Qualitative and Quantitative data was collected and analyzed using the SPSS statistical package. Results revealed high (>50%) pre-intervention prevalence of tobacco use and oral diseases related to tobacco usage and no community initiative towards control of tobacco use. Post intervention data revealed 4% quitting, 3% dose reduction and 2% reduction in usage of multiple types of tobacco. The study demonstrated that community centered mass approaches with minimal sustained intervention was more effective than clinic centered, intensive, individual approach.

PMID: 15709601 [PubMed - indexed for MEDLINE]

**Sinha DN, Gupta PC.** *Tobacco control practices by medical doctors in developing world; a questionnaire study.* **Indian J Public Health.** 2004 Jul-Sep; 48(3):144-6.

**Abstract**

**AIM:** To know about the tobacco control practices by medical doctors in Bihar, India.

**SETTINGS & DESIGN:** All medical doctors in Bihar, India. Two stage sampling with probability proportional to the number of doctors in the districts was used.

**METHOD:** Anonymous survey was conducted on structured questionnaire.

**STATISTICAL ANALYSIS:** SUDAAN and Epi Info.

**RESULTS:** Most of the doctors were government doctors. Most doctors (>75%) reported either for no policy or partial policy in health settings however over 2/3rd of medical doctors felt need for their training on tobacco cessation. Most of the doctors did not take tobacco history (60-80%).

**CONCLUSION:** Medical doctors in Bihar need to be trained for tobacco cessation. Smoking needs to be enforced vigorously in health sector to protect patients and doctors.

PMID: 15709602 [PubMed - indexed for MEDLINE]


**Abstract**

This study examined the relationship between school tobacco policies and tobacco use prevalence among school personnel. Two subsets of schools were identified in Bihar, India: Federal Schools (with a tobacco policy), and State schools (without a tobacco policy). Stratified probability samples of 50 schools each were selected. The
survey was conducted through an anonymous, self-administered questionnaire. School personnel from State Schools (non-policy schools) reported significantly higher daily cigarette smoking and daily current smokeless tobacco use compared to personnel in Federal schools (policy schools). Teachers in State schools did not teach about health consequences of tobacco, and they had not received training for such teaching. Extent of teaching about health consequences of tobacco varied across topics for teachers in Federal schools. They received negligible training, but more than 35% reported access to teaching materials. More than one-half the personnel from Federal schools knew about their school's policy prohibiting tobacco use among students and school personnel, and about policy enforcement. Personnel in State schools did not know about tobacco control policy in their schools. All school personnel in both types of schools were near unanimous in supporting policy prohibiting tobacco use in schools. The study demonstrated an association between enacting a school policy regarding tobacco use and school personnel's use of tobacco, curriculum teaching, and practical training of students. Findings suggest that more extensive introduction of comprehensive school policies may help reduce tobacco use among school personnel.

PMID: 15022368 [PubMed - indexed for MEDLINE]

http://www.searo.who.int/tobacco/data/en/

Summary

The manual is intended primarily for people who work in a health facility serving a 'local' population. A doctor or nurse or someone else in the health facility can use the guidelines to create changes in the communities served by them. But people outside the medical or health professions too can use these guidelines effectively. The interventions (except sections in chapter 8 on 'cessation') can be implemented by any concerned individual, and do not require special medical expertise. The manual can be used for self-instruction or for training. The activities suggested are for implementation at the level of local communities, not at national level. So the emphasis is on action relevant to a community or a clinic.


Abstract

This report summarizes the health consequences and costs associated with tobacco use. It reviews price trends for tobacco products in Bangladesh, India, Indonesia, Nepal, Thailand and Sri Lanka. It reports trends in government tobacco tax revenues and how tobacco products are currently taxed in these countries, and in Maldives and Myanmar. The third section examines the demand for tobacco products in south-east Asian countries. A literature review on the demand for tobacco products in developing countries is followed by new analysis using time series and household-level data. The revenue-generating potential of tobacco taxes in south-east Asian countries is discussed. Finally, the report discusses contraband trade in tobacco products in South-East Asia, with emphasis on the industry's alleged role in smuggling.

http://www.searo.who.int/tobacco/data/india.pdf?ua=1

http://www.searo.who.int/tobacco/data/en/

Summary

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4. Tobacco Promotion: Advertising and Sponsorship


Abstract

Tobacco companies are utilizing similar strategies to advertise and promote their products in developing countries as they have used successfully for over 50 years in developed countries. The present study describes how adult smokers, smokeless tobacco users, and non-users of tobacco from the Tobacco Control Project (TCP) India Pilot Survey, conducted in 2006, responded to questions regarding their perceptions and observations of pro-tobacco advertising and promotion and beliefs about tobacco use. Analyses found that 74% (n=562) of respondents reported seeing some form of pro-tobacco advertising in the last six months, with no differences observed between smokers (74%), smokeless tobacco users (74%), and nonsmokers (73%). More than half of respondents reported seeing pro-tobacco advertising on store windows or inside shops. Overall, this study found that a significant percentage of tobacco users and non-users in India report seeing some form of pro-tobacco advertising and promotion messages. Additional analyses found that smokers were more likely to perceive tobacco use as harmful to their health compared with smokeless tobacco users and non-users (p<0.01). The findings from this study reiterate the need for stronger legislation and strict enforcement of bans on direct and indirect advertising and promotion of tobacco products in India.


Abstract

INTRODUCTION: The developing world, including countries like India, has become a major target for the tobacco industry to market its products. This study examines the influence of the marketing (advertising and promotion) of tobacco products on the use of tobacco by adults (ages 15 and over) in India.

METHOD: Data from Global Adult Tobacco Survey 2009-2010 was analyzed using methods for complex (clustered) sample designs. Multivariate logistic regression was employed to predict the use of different tobacco products by level of exposure to tobacco marketing using adults who have never used tobacco as the reference category. Odds ratios (ORs) were adjusted for education, gender, age, state of residence, wealth index, and place of residence (urban/rural).

RESULTS: Adults in India were almost twice as likely to be current smokers (versus never users) when they were exposed to a moderate level of bidi or cigarette marketing. For bidis, among adults with high exposure, the OR for current use was 4.57 (95% confidence interval [CI]: 1.6, 13.0). Adults were more likely to be current users of smokeless tobacco (SLT) with even a low level of exposure to SLT marketing (OR = 1.24 [95% CI: 1.1, 1.4]). For SLT, the ORs showed an increasing trend (P for trend < 0.001) with greater level of exposure (moderate, OR = 1.55 [95% CI: 1.1, 2.2]; high, OR = 2.05 [95% CI: 0.8, 5.1]). The risk of any current tobacco use rose with increasing level of exposure to any marketing (minimum, OR = 1.25 [1.1-1.4]; moderate, OR = 1.38 [1.1-1.8]; and high, OR = 2.73 [1.8-4.2]), with the trend highly significant (P < 0.001).

CONCLUSION: Exposure to the marketing of tobacco products, which may take the form of advertising at the point of sale, sales or a discounted price, free coupons, free samples, surrogate advertisements, or any of several other modalities, increased prevalence of tobacco use among adults. An increasing level of exposure to direct and indirect advertisement and promotion is associated with an increased likelihood of tobacco use.

PMID: 25526242 [PubMed - in process]

Abstract

INTRODUCTION: Recently, a tobacco product, Chaini Khaini, identified as snus appeared in India. The product marketing emphasizes its discreet nature and explicitly claims safety by referring to the existing evidence on Swedish snus. We analysed tobacco-specific nitrosamines and nicotine in 12 samples of Chaini Khaini purchased in 2013 at open markets in India.

METHODS: Samples were purchased twice: in March 2013 from Mumbai and in November 2013 from Mumbai and Ahmedabad. Chemical constituents were measured by our routine validated methods.

RESULTS: Levels of carcinogenic nitrosamines NNN, NNK and NNAL averaged 22.9 (±4.9), 2.6 (±1.0) and 3.1 (±1.5) µg/g tobacco (wet weight), respectively. The levels of NAB, which is normally present in trace levels in tobacco products, ranged from 3.9 to 12.9 µg/g tobacco. Total nicotine levels in all samples averaged 10.0 mg/g tobacco and unprotonated nicotine accounted for an average 95.4% of the total nicotine content.

CONCLUSIONS: Chaini Khaini, which is labelled as snus and is marketed as a safe alternative to other tobacco products contains very high levels of carcinogenic nitrosamines and biologically available nicotine. Interventions are urgently needed to educate current and potential consumers of this product.

PMID: 25217658 [PubMed - as supplied by publisher]


Abstract

OBJECTIVE: To estimate exposure to tobacco imagery in youth-rated Bollywood films, and examine the results in light of recent developments in India's film rating system.

METHODS: Content coding of 44 top grossing Bollywood films (including 38 youth-rated films) released during 2006–2008 was undertaken to estimate tobacco occurrences and impressions.

RESULTS: Out of the 38 youth-rated (U and U/A) films coded, 50% contained tobacco imagery. Mean tobacco occurrences were 1.9, 2.9 and 13.7 per U, U/A and adult (A) rated films, respectively. Top grossing youth-rated films delivered 1.91 billion tobacco impressions to Indian cinema audiences.

CONCLUSIONS: Half the youth-rated Bollywood films contain tobacco imagery resulting in large population level exposure in India, relative to other countries. Measures to reduce youth exposure to tobacco imagery through films, such as restricting access through the rating system, will complement other tobacco control measures.


Abstract

Unlike high income countries, there is limited research to guide selection of anti-tobacco mass media campaigns in low and middle income countries, although some work suggests that messages emphasizing serious health harms perform better than other message types. This study aimed to determine whether certain types of anti-smoking advertisements are more likely to be accepted and perceived as effective across smokers in 10 low to middle income countries. 2399 18-34 year old smokers were recruited in Bangladesh, China, Egypt, India, Indonesia, Mexico, Philippines, Russia, Turkey and Vietnam to view and rate 10 anti-tobacco ads. Five ads were shown in all countries and five ads were chosen by country representatives, providing a total of 37 anti-smoking ads across all countries (10 graphic health effects ads, 6 simulated health effects, 8 emotional stories of health effects, 7 other health effects and 6 non-health effects). Smokers rated ads on a series of 5-point scales containing aggregated measures of Message Acceptance and Perceived Effectiveness. All ads and materials were translated into the local language of the testing regions. In multivariate analysis, graphic health effects ads were most likely to be accepted and perceived as effective, followed by simulated health effects ads, health
effects stories, other health effects ads, and then non-health effects ads. Interaction analyses indicated that graphic health effects ads were less likely to differ in acceptance or perceived effectiveness across countries, gender, age, education, parental status and amount smoked, and were less likely to be affected by cultural differences between characters and contexts in ads and those within each country. Ads that did not emphasize the health effects of smoking were most prone to inconsistent impact across countries and population subgroups. Graphic ads about the negative health effects of smoking may be most suitable for wide population broadcast in low and middle income countries.

PMID: 24331900 [PubMed - indexed for MEDLINE]


Abstract

BACKGROUND: Pro smoking messages, delivered through marketing and the media, can reach very young children and influence attitudes and behaviors around smoking. This study examined the reach of tobacco marketing to 5 and 6 year olds in 6 low- and middle-income countries.

METHODS: Researchers worked one-on-one with 5 and 6 year olds in Brazil, China, India, Nigeria, Pakistan, and Russia (N = 2423). The children were asked to match logos with pictures of products, including 8 logos for cigarette brands. Analyses examined, overall and by country, whether gender, age, location, household use of tobacco, and knowledge of media characters were associated with awareness of cigarette brand logos. Additional analyses considered the relationship between cigarette brand logo awareness and intentions to smoke.

RESULTS: Overall, 68% of 5 and 6 year olds could identify at least 1 cigarette brand logo, ranging from 50% in Russia to 86% in China. Across countries, being slightly older and having someone in the household who used tobacco, were significantly associated with greater odds of being able to identify at least 1 cigarette brand logo.

CONCLUSIONS: The majority of young children from low- and middle-income countries are familiar with cigarette brands. This study's findings suggest that more effective measures are needed to restrict the reach of tobacco marketing.

PMID: 24081996 [PubMed - indexed for MEDLINE]


Abstract

This study assessed perceptions and support among the Indian populace about plain packaging for all tobacco products. Twelve focus group discussions (n = 124), stakeholder analysis with 24 officials and an opinion poll with 346 participants were conducted between December 2011 and May 2012, Delhi. Plain packages for tobacco products were favored by majority of participants (69%) and key stakeholders (92%). The majority of participants perceived that plain packaging would reduce the appeal and promotional value of the tobacco pack (>80%), prevent initiation of tobacco use among children and youth (>60%), motivate tobacco users to quit (>80%), increase notice ability, and effectiveness of pictorial health warnings on tobacco packs (>90%), reduce tobacco usage (75% of key stakeholders). Majority of participants favored light gray color for plain packaging. This study provides key evidence to advocate with Indian Government and other countries in South Asia region to introduce plain packaging legislation for all tobacco products.

PMID: 24350204 [PubMed] PMCID: PMC3859976

Abstract

BACKGROUND: India's Cigarettes and Other Tobacco Products Act bans tobacco sales and advertisements within 100 yards of educational institutions. In school-adjacent neighbourhoods in Mumbai, we assessed adherence to these policies and whether tobacco vendor and advertisement densities were associated with students' tobacco use.

METHODS: High school students' tobacco use was measured using a multistage cluster sampling survey (n=1533). Field geographic information systems data were obtained for all tobacco vendors and advertisements within 500 m of schools (n=26). Random-effects multilevel logistic regression was used to estimate associations of tobacco vendor and advertisement densities with ever tobacco use, current smokeless tobacco use and current tobacco use.

RESULTS: There were 1741 tobacco vendors and 424 advertisements within 500 m of schools, with 221 vendors (13%) and 42 advertisements (10%) located within 100 m. School-adjacent tobacco vendor density within 100 m was not associated with the tobacco use outcomes, but tobacco advertisement density within 100 m was associated with all outcomes when comparing highest to lowest density tertiles: ever use (OR: 2.01; 95% CI 1.00 to 4.07), current use (2.23; 1.16, 4.28) and current smokeless tobacco use (2.01; 1.02, 3.98). Tobacco vendor density within 200, 300, 400 and 500 m of schools was associated with current tobacco use and current smokeless tobacco use, but not ever use.

CONCLUSIONS: The tobacco sales ban near educational institutions could be expanded beyond 100 m. Greater enforcement is needed regarding the current bans, particularly because advertisement density within 100 m of schools was associated with all students' tobacco use outcomes.

PMID: 23958643


Abstract

INTRODUCTION: The Cigarettes and Other Tobacco Products (Prohibition of Advertising and Regulations of Trade and Commerce, Production, Supply and Distribution) Act 2003 (COTPA) set out a number of stringent regulations to address tobacco promotion, some of which were revised in 2004. The aim of the study was to monitor the industry tactics at the point of sale with advertising and promotion of tobacco product in Mumbai.

MATERIALS AND METHODS: The study was carried out by Cancer Patients Aid Association in Mumbai with the help of volunteers. The surveys consisted of two parts, observational information and an interviewer administered questionnaire. Observations like size of board, display of advertisement, backlighting, and use of any promotion were noted. A questionnaire captured information about any incentives from tobacco companies for advertisement and promotion was administered to the vendors who agreed to participate. Study was approved by the Scientific and independent Ethics committee.

RESULTS: Total 125 establishments (58 shops, 55 kiosks, 12 other sites) with display boards were surveyed across 5 wards in Mumbai. It was noted that the most common violation was the placements of boards, mainly placed above the shop. The display boards were oversized and few of the advertisements were highlighted with backlights. Out of 125 tobacco vendors surveyed, 107 (85.5%) vendors agreed to answer the questionnaire. We noted that a majority of 67% (84 vendors) stated that they had been approached by tobacco companies to place the signages during the past 5 years post COTPA came into effect. 79 vendors (65 %) admitted to being paid by the tobacco companies. DISCUSSION: Although the civil society and various non-governmental organizations has casted voice against the industry tactics but ineffective enforcement of the law is a major hurdle. It is likely that cigarette companies will be further able to overcome advertising restrictions by finding loopholes in tobacco legislation unless the decision makers ban it comprehensively as evident in other countries.

PMID: 24061466

CONCLUSIONS:

smokeless tobacco use, but not ever use.

within 100 m was not associated with the tobacco use outcomes, but tobacco advertisement density within 100 m vendors (13%) and 42 advertisements (10%) located within 100 m. School-adjacent tobacco vendor density

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An annotated bibliography of scientific studies done on tobacco topic in WHO South-East Asia Region countries

the Scientific and independent Ethics committee.

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schools was associated with all students' tobacco use outcomes.

BACKGROUND:

Abstract

OBJECTIVES: The Government of India passed the Cigarettes and Other Tobacco Products (Prohibition of

Advertisement and Regulation of Trade and Commerce, Production, Supply and Distribution) Act, 2003 (COPTA

2003), which prohibits the sale of tobacco products within 100 yards of educational institutions and regulates

tobacco advertising. The aim of this research was to monitor compliance with the section of COPTA 2003

regarding the advertisement, display and sale of tobacco products around educational institutions in Ahmedabad

City, India.

STUDY DESIGN: Observational study around 30 randomly selected schools. METHODS: In March 2010, an

observational study was conducted to assess compliance with COPTA 2003 in Ahmedabad City, India. All

vendors within a 100-yard radius of 30 randomly selected schools were identified. At locations where tobacco

was sold, information was collected regarding type of product sold, sale of tobacco in single units and advertising.

RESULTS: Twenty public schools and 10 private schools were sampled. Of these, 87% [n = 26, 95% confidence

interval (CI) 69-95%] had tobacco sales within 100 yards of their entrance. Of the 771 vendors observed, 24% (n

= 185, 95% CI 18-32%) sold tobacco products. Tobacco advertising in violation of the law was found around 57% of

schools (n = 17, 95% CI 39-73%), product displays around 83% of schools (n = 25, 95% CI 65-93%) and

single sales around 70% of schools (n = 21, 95% CI 51-84%).

CONCLUSIONS: Violation of the sections of COPTA 2003 regarding sale of tobacco products around

educational institutions and advertising in general is widespread in Ahmedabad City, India. Effective enforcement of

the existing law is necessary to protect the children in India from widespread exposure to the sale and

marketing of tobacco products.

PMID: 23608024 [PubMed - indexed for MEDLINE]

Wakefield M, Bayly M, Durkin S, et al. Smokers' responses to television advertisements about the serious

harms of tobacco use: pre-testing results from 10 low- to middle-income countries. Tob Control. 2013 Jan;


Abstract

BACKGROUND: While television advertisements (ads) that communicate the serious harms of smoking are

effective in prompting quitting-related thoughts and actions, little research has been conducted among smokers in

low- to middle-income countries to guide public education efforts.

METHOD: 2399 smokers aged 18-34 years in 10 low- to middle-income countries (Bangladesh, China, Egypt,

India, Indonesia, Mexico, Philippines, Russia, Turkey and Vietnam) viewed and individually rated the same five

anti-smoking ads on a standard questionnaire and then engaged in a structured group discussion about each ad.

Multivariate logistic regression analysis, with robust SEs to account for the same individual rating multiple ads,

was performed to compare outcomes (message acceptance, perceived personalised effectiveness, feel

uncomfortable, likelihood of discussing the ad) across ads and countries, adjusting for covariates. Ads by country

interactions were examined to assess consistency of ratings across countries.

RESULTS:

Three ads with graphic imagery performed consistently highly across all countries. Two of these ads showed

diseased human tissue or body parts, and a third used a disgust-provoking metaphor to demonstrate the

accumulation in smokers' lungs. A personal testimonial ad performed more variably, as many smokers did not

appreciate that the featured woman's lung cancer was due to smoking or that her altered physical appearance

was due to chemotherapy. An ad using a visual metaphor for lung disease was also more variable, mostly due to

lack of understanding of the term 'emphysema'.

CONCLUSION: Television ads that graphically communicate the serious harms of tobacco use are likely to be

effective with smokers in low- to middle-income countries and can be readily translated and adapted for local use.

Ads with complex medical terms or metaphors, or those that feature personal testimonials, are more variable and

at least require more careful pre-testing and adaptation to maximise their potential.

PMID: 21994276 [PubMed - indexed for MEDLINE]


**Abstract**

**BACKGROUND:** Smoking in Hollywood movies is a known risk factor for teen smoking in the USA and Europe, but little is known about the association between exposure to tobacco use in Bollywood movies and teen tobacco use in India.

**METHODS:** A cross-sectional sample of 3956 adolescents (eighth and ninth grades, ages 12-16 years) from 12 randomly selected New Delhi schools was surveyed in 2009, assessing tobacco use status, receptivity to tobacco promotions (based on owning or being willing to wear tobacco-branded merchandise) and exposure to tobacco use in movies. Quartiles of exposure to tobacco use in popular Bollywood movies released from 2006 to 2008 (n=59) were determined by content coding them for tobacco use and querying the adolescents whether they had seen each one. Logistic regression was used to control for covariates including age, gender, parent education, school performance, sensation-seeking propensity, family and peer tobacco use, and authoritative parenting.

**RESULTS:** Altogether, the 59 movies contained 412 tobacco use occurrences. The prevalence of ever tobacco use among adolescents was 5.3%. Compared with low-exposure adolescents (quartile 1), the adjusted odds of ever tobacco use among high-exposure adolescents (quartile 4) was 2.3 (95% CI 1.3 to 3.9). Being receptive to tobacco promotions was also associated with higher adjusted odds of ever tobacco use, 2.0 (95% CI 1.4 to 3.0).

**CONCLUSION:** Watching tobacco use in Bollywood movies and receptivity to tobacco promotional activities were both independently associated with ever tobacco use among adolescents in India, with ORs being similar to the studies of adolescents elsewhere.

PMID: 21730099 [PubMed - indexed for MEDLINE] PMCID: PMC3420563

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**Abstract**

According to the 2012 Report of the U.S. Surgeon General, exposure to tobacco advertising, promotion, and sponsorship (TAPS) is associated with the initiation and continuation of smoking among young persons. The World Health Organization (WHO) Framework Convention on Tobacco Control (FCTC) requires countries to prohibit all forms of TAPS; the United States signed the agreement in 2004, but the action has not yet been ratified. Many countries have adopted partial bans covering direct advertising in traditional media channels; however, few countries have adopted comprehensive bans on all types of direct and indirect marketing. To assess progress toward elimination of TAPS and the level of awareness of TAPS among persons aged ≥15 years, CDC used data from the Global Adult Tobacco Survey (GATS) collected in 14 countries during 2008-2010. Awareness of any TAPS ranged from 12.4% in Turkey to 70.4% in the Philippines. In the four countries where awareness of TAPS was ≤15%, three of the countries had comprehensive bans covering all nine channels assessed by GATS, and the fourth country banned seven of the nine channels. In 12 countries, more persons were aware of advertising in stores than advertising via any other channel. Reducing exposure to TAPS is important to prevent initiation of tobacco use by youths and young adults and to help smokers quit.

PMID: 22622091 [PubMed - indexed for MEDLINE] (India, Bangladesh and Thailand mentioned in full text)

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**Abstract**

**BACKGROUND:** Exposure to mass media may impact the use of tobacco, a major source of illness and death in India. The objective is to test the association of self-reported tobacco smoking and chewing with frequency of use of four types of mass media: newspapers, radio, television, and movies.

**METHODOLOGY/PRINCIPAL FINDINGS:** We analyzed data from a sex-stratified nationally-representative cross-sectional survey of 123,768 women and 74,068 men in India. All models controlled for wealth, education, caste, occupation, urbanicity, religion, marital status, and age. In fully-adjusted models, monthly cinema attendance is associated with increased smoking among women (relative risk [RR]: 1.55; 95% confidence interval
ever tobacco use among high-exposure adolescents (quartile 4) was 2.3 (95% CI 1.3 to 3.9). Being receptive to use among adolescents was 5.3%.

CONCLUSION/SIGNIFICANCE: In India, exposure to visual mass media may contribute to increased tobacco consumption in men and women, while newspaper use may suppress the use of tobacco chewing in women. Future studies should investigate the role that different types of media content and media play in influencing other health behaviors.

PMID: 20614005 [PubMed - indexed for MEDLINE] PMCID: PMC2894069


Abstract

OBJECTIVE: To examine the relationship between tobacco advertisements, counter-advertisements, and smoking status among Indian youth.

MATERIALS AND METHODS: Global Youth Tobacco Survey (GYTS) data was used; the data encompassed a representative two-stage probability sample of 60,001 students aged 13-15 years in 24 states in India. These students were interviewed with an anonymous, self-administered questionnaire. Binary logistic regression analyses were performed with smoking status as the dependent variable, and exposure to cigarette advertisements or counter-advertisements as independent variables.

RESULTS: Students watching anti-smoking media messages were less likely to be current smokers, which was true for both boys [OR = 0.89, 95% CI (0.81-0.98)] and girls [OR = 0.79, 95% CI (0.69-.90)]. This relationship was stronger among past smokers for boys [OR = 0.56, 95% CI (0.52-0.60)] and girls [OR = 0.49, 95% CI (0.45-0.53)]. On the other hand, students who were exposed to cigarette brand names during sports events and other televised programs, newspapers or magazines, and being offered free cigarette or cigarette-branded merchandise promotions were significantly more likely to be smokers, with effects ranging from moderate (OR=1.19) to very strong (OR=3.83).

CONCLUSIONS: This is the first attempt from India to investigate the relationship between smoking and advertising. When the data were collected, cigarette advertising was legal and highly correlated with smoking behavior. Today, indirect surrogate advertising still exists; future research should examine its effect, as it is likely to have the same impact as direct advertising on smoking behavior. Finally, counter-advertising has a protective effect on youth and may function as a cessation aid.

PMID: 19256752 [PubMed - indexed for MEDLINE]


Abstract

OBJECTIVES: To study if receptivity and exposure to tobacco marketing are correlated with tobacco use and psychosocial risk factors for tobacco use among a sample of urban Indian youth.

METHODS: Analysis of cross-sectional survey data from Project MYTRI, a group randomized intervention trial, in Delhi and Chennai, India, collected from sixth and eighth graders (n=11,642), in 32 schools in 2004.

RESULTS: Exposure to tobacco advertisements and receptivity to tobacco marketing were significantly related to increased tobacco use among students.

CONCLUSION: This association suggests the need to strengthen policy and program-based interventions in India to reduce the influence of such exposures.
Tobacco-specific nitrosamines were detected in certain brands of khaini, with levels ranging from 1.74-76.9 and 0.08-28.4 microg/g, respectively. The highest levels of tobacco-specific nitrosamines were found in gutka, with specific nitrosamines such as N-nitrosonornicotine (NNN), N′-nitrosoanatabine (NAT), N′-nitrosoanabasine (NAB) and 4-(methylnitrosamino)-1-(3-pyridyl)-1-butanol (NNK). Levels of nitrate, nitrite and nicotine were also determined. The highest levels of tobacco-specific nitrosamines were found in certain brands of khaini, zarda and other smokeless tobacco products. Concentrations of NNN and NNK in these products ranged from 1.74-76.9 and 0.08-28.4 microg/g, respectively. Levels of tobacco-specific nitrosamines in gutka were generally somewhat lower than in these products but still considerably higher than nitrosamine levels in food. The results of our study demonstrate that exposure to substantial amounts of carcinogenic tobacco-specific nitrosamines through use of smokeless tobacco products remains a major problem in India.
RESULTS: Cigarette advertising was ubiquitous in the environment, present in news and in film magazines, but not in women's magazines or the newspapers. The four major advertising campaigns all associated smoking with aspiration; the premium brands targeting the higher socioeconomic status market utilised tangible images of westernization and affluence whereas the "bingo" (low priced) segment advertisements invited smokers to belong to a league of their own and "rise to the taste" using intangible images. Women were not depicted smoking, but were present in cigarette advertisements—for example, a woman almost always accompanied a man in “the man with the smooth edge” Four Square campaign. Advertisements and product placements at low heights and next to candies at point of sale were easily accessible by children. In view of the imminent enforcement of the ban on tobacco advertisements, cigarette companies are increasing advertising for the existing brand images, launching brand extensions, and brand stretching.

CONCLUSION: Cigarette companies have developed sophisticated campaigns targeting men, women, and children in different socioeconomic groups. Many of these strategies circumvent the Indian tobacco advertising ban. Understanding these marketing strategies is critical to minimise the exploitation of loopholes in tobacco control legislation.

PMID: 15923471 [PubMed - indexed for MEDLINE] PMCID: PMC1748039


Abstract

BACKGROUND: Pan masala is a comparatively recent habit in India and is marketed with and without tobacco. Advertisements of tobacco products have been banned in India since 1st May 2004. The advertisements of plain pan masala, which continue in Indian media, have been suspected to be surrogate for tobacco products bearing the same name. The study was carried out to assess whether these advertisements were for the intended product, or for tobacco products with same brand name.

MATERIALS AND METHODS: The programme of a popular television Hindi news channel was watched for a 24-h period. Programmes on the same channel and its English counterpart were watched on different days to assess whether the advertisements were repeated. The total duration of telecast of a popular brand of plain pan masala (Pan Parag) was multiplied by the rate charged by the channel to provide the cost of advertisement of this product. The total sale value of the company was multiplied by the proportion of usage of plain pan masala out of gutka plus pan masala habit as observed from a different study, to provide the annual sale value of plain pan masala product under reference.

RESULTS: The annual sale value of plain Pan Parag was estimated to be Rs. 67.1 million. The annual cost of the advertisement of the same product on two television channels was estimated at Rs. 244.6 million.

CONCLUSION: The advertisements of plain pan masala seen on Indian television are a surrogate for the tobacco products bearing the same name.

PMID: 16141509 [PubMed - indexed for MEDLINE]


Abstract

RESEARCH QUESTION: To examine impact of Gutka advertisement on smokeless tobacco use.

OBJECTIVE: To investigate tobacco use prevalence and related issues among 13-15 years students in Sikkim, India.

STUDY DESIGN: Survey through anonymous, self-administered questionnaire on a two-stage probability sample proportional to the enrollment size.
SETTING: Schools having grade 8-10.

PARTICIPANTS: Students in grade 8-10.

STUDY VARIABLES: Tobacco use, gender, exposure to gutka advertisements.

STATISTICAL ANALYSIS: With Epi Info software, percentage with 95% confidence interval.

RESULTS: The overall response rate was over 85% and the proportion of boys was 55%. Current smokeless tobacco (boys, 35.5-49.5%, girls, 27.2-36.4%) and gutka (boys 8.4-22.2%, girls, 14.2-22.2%) use and exposure to gutka advertisements was reported equally by boys and girls. Current smokeless tobacco users than never tobacco users were significantly more likely to watch gutka advertisements in all media; to have something with gutka brand names; and to have positive attitude towards tobacco use.

CONCLUSION: Strong association between exposure to gutka advertisement and current smokeless tobacco use among boys and girls in Sikkim is shown. Stronger restriction by the government is recommended.

5. Tobacco economics including interference of the tobacco industry


Abstract

BACKGROUND: Bidis, the most common smoking tobacco product in India, remain largely untaxed and are subject to very few regulations to discourage their use. A major argument against tax increases is the large potential loss of economic activity and employment in the bidi industry from reduced consumption.

METHODS: We used a nationally representative survey of unorganised bidi manufacturing firms (n=2841) in India to estimate the economic contribution of the industry.

RESULTS: We find that of the 35 states and union territories of India, the bidi industry operated across 17 states, with over 95% of its production concentrated in 10 states. Bidi manufacturing firms contributed 0.50% of total sales and 0.6% of the gross value added by the manufacturing economy in 2005-2006. The industry employed approximately 3.4 million full-time workers, which comprise about 0.7% of employment in all sectors. A further 0.7 million were part-time workers; Bidi workers were also among the lowest paid employees in India. The industry offered only 0.09% of all compensation provided in the manufacturing sector (organised and unorganised).

CONCLUSIONS: Considering the relatively small economic footprint of the bidi industry in India, higher excise taxes and regulations on bidis are unlikely to disrupt economic growth at an aggregate level, or lead to mass unemployment and economic hardship among small bidi workers. On average, the economic annual output per bidi worker is about US$143, which is an order of magnitude smaller than the large economic losses from the several hundred thousand deaths due to bidi smoking per year.

PMID: 24789606 [PubMed - as supplied by publisher]


Abstract

CONTEXT: To explore genotoxicity in bidi rollers occupationally exposed to bidi tobacco dust.

AIMS: To assess the extent of genotoxicity of tobacco dust to bidi rollers of Jabalpur, Madhya Pradesh, India and cytotoxicity of bidi tobacco extract.

SETTINGS AND DESIGN: Blood samples from 31 bidi rollers and 30 controls taken after written informed consent were analyzed for chromosome aberrations (CA) and comet assay.
MATERIALS AND METHODS: Genotoxicity was studied by CA in cultured peripheral blood lymphocytes of bidi rollers and the deoxyribonucleic acid (DNA) damage studies were done by comet assay of their blood. The toxicity of bidi tobacco extract to normal human lymphocytes was studied by MMT (3-[4,5-dimethylthiazol-2-yl]-2,5 diphenyl tetrazolium bromide) assay as drop in viability.

STATISTICAL ANALYSIS USED: Student's t-test and DMRT.

RESULTS: There is a general trend of increase in CA% of both in exposed and control groups with age, but in every group the bidi rollers have a significantly higher CA% than the controls. The CA % is also directly related to exposure. The comet assay findings reveal that the mean comet length and tail length increases with exposure time. The toxicity of bidi tobacco extract (TE) to normal human lymphocytes was tested in vitro by 3-[4,5-dimethylthiazol-2-yl]-2,5 diphenyl tetrazolium bromide (MTT) assay at 2 h of incubation. The trend of drop in viability with increasing concentrations of TE was clearly evident from the data from four donors in spite of their individual differences in viability.

CONCLUSIONS: The results obtained in this investigation indicate that bidi rollers seem to be facing the occupational hazard of genotoxicity due to handling bidi tobacco and inhalation of tobacco dust. They should be advised to work under well-ventilated conditions.

PMID:24748730[PubMed] PMCID:PMC3989910


Abstract: In the economic field and society these problem arise and effect on growth of economy in direct and indirect way. In certain ways, direct and indirect costs to economy growth. Keeping use tobacco in future generations is dangerous to his/her health. The health and economic burden of tobacco use on our society far exceeds the revenue generated through tax collected from the tobacco industry. Tobacco consumption accumulates; it is increasingly becoming evident that tobacco inflicts high direct and indirect costs on society. This paper explains the direct and indirect cost to individual, society and economy of India.


Abstract

BACKGROUND: Studies in India have identified marked variations in overall tobacco use between socio-economic groups. We examined whether associations between socio-economic status (SES) and tobacco use varied across individual Indian states by tobacco type. METHODS: Cross-sectional survey of 100,855 households in 24 Indian states and Union Territories conducted in 2009-2010. Outcome measures were household tobacco consumption by type. Logistic and linear regression models were used to examine associations at the household level between education, income and use and volume of tobacco consumed. RESULTS: Overall, 52% of households used any form of tobacco product; the predominant form was smokeless tobacco (22%), followed by bidi (17%) and cigarettes (4%). Increasing household income and higher education level were associated with a higher likelihood of cigarette use but a lower likelihood of bidi and smokeless tobacco use in some Indian states. Increasing household income was associated with higher volumes of cigarette and bidi use among consuming households; however, association between educational level and volume of tobacco consumption was inconsistent. CONCLUSION: SES has a varying impact on different types of tobacco use in Indian states. Policy makers should consider socio-economic patterning of tobacco use when designing, implementing and evaluating tobacco control interventions in different states of India.

PMID: 23827038 [PubMed - indexed for MEDLINE]

Biswas T. Study maps the link between socioeconomic status and tobacco use across India. BMJ. 2013 Jul 19; 347:f4635. doi: 10.1136/bmj.f4635.

No abstract available

PMID: 23873950 [PubMed - indexed for MEDLINE]

Abstract

BACKGROUND: It is thought that price increase in tobacco products leads to reduced consumption. Though many studies have substantiated this concept, it has not been well studied in India. Recently, price of tobacco products was increased due to ban on plastic sachets of chewing tobacco and increased tax in Rajasthan. This study was designed to evaluate the effect of price rise on overall consumption of tobacco in Jaipur city, Rajasthan.

MATERIALS AND METHODS: This study was carried out in Jaipur city. Two-staged stratified sampling was used. In the first phase of study, cost and consumption of various tobacco products in the months of February and April were enquired from 25 retail tobacco shops. In the second phase, tobacco consumption was enquired from 20 consecutive consumers purchasing any tobacco product from all the above retail tobacco shops. The data were statistically analyzed using descriptive statistics and paired "t" test.

RESULTS: The comparison of prices of tobacco products between February and April revealed that the price of cigarette, bidi, and chewing tobacco has increased by 19%, 21%, and 68%, respectively. Average decrease in sales of cigarettes, bidi, and chewing tobacco at shops included in the study were 14%, 23%, and 38%, respectively. The consumers purchasing tobacco also reported decreased consumption. Chewing tobacco showed the maximum reduction (21%). Consumption of cigarette and bidi has also reduced by 15% and 13%, respectively.

CONCLUSION: It may be concluded that reduction in consumption is associated with increased price of tobacco products. Reduced consumption is comparative to the magnitude of price increase.

PMID: 22919157 [PubMed] PMCID: PMC3424857


Abstract

Intervention programs aimed at preventing tobacco use among youth have been shown to be effective in curbing tobacco use onset and progression. However, the effects of even very successful tobacco prevention programs may not always impress policy-makers and lay audiences. Economic analysis potentially strengthens the case. In this paper, we evaluate the cost-effectiveness of a youth tobacco use prevention program which has been translated and implemented in India, a developing country. Although programs like these are inexpensive to implement in the USA, they are even less expensive in India due to low labor costs. Our results show that the costs per quality-adjusted life-year added, due to averted smoking, was $2057, even without including averted medical costs. If we ignore student time, cost-effectiveness improves by roughly 10%. To put the cost-effectiveness of this smoking prevention program into context, it is over 24 times more cost-effective than dialysis in the USA, which costs $50,000 for a life-year.

PMID: 22271928 [PubMed - indexed for MEDLINE] PMCID: PMC3651691


Abstract

BACKGROUND AND OBJECTIVE: Urban subjects have high burden of cardiovascular risk factors, therefore, to evaluate risk factors in middle socioeconomic subjects and to study secular trends we performed an epidemiological study.

METHODS: The study was performed at urban middle class locations defined according to municipal records in years 2009-10. Stratified random sampling using house-to-house survey was performed. Details of medical history, anthropometry and clinical examination were recorded and biochemical tests performed for estimation of fasting glucose and lipids. Current definitions were used for risk factor classification. Descriptive statistics are
provided. Trends were calculated using ANOVA or Mantel Haenszel chi-square. Univariate and multivariate logistic regression was performed to assess risk factor determinants. To determine secular trends we compared risk factors with previous cross-sectional studies performed in same locations in years 2002-3 and 2004-5 in subjects 20-59 years age.

RESULTS: We evaluated 739 subjects (men 451, women 288, response 67%). Age-adjusted prevalence (%) of risk factors in men and women respectively was smoking 95 (21.1) and 12 (4.2), low physical activity 316 (69.6) and 147 (32.3), high fat intake $> \text{or} = 20 \text{gm/day}$ 278 (73.4) and 171 (68.7), low fruits and vegetables intake $< 3$helpings/day 249 (70.3) and 165 (76.4), overweight/obesity 205 (46.2) and 142 (50.7), high waist size 58 (12.9) and 76 (26.6), high waist:hip 143 (31.9) and 154 (53.9), hypertension 177 (39.5) and 71 (24.6), high total cholesterol $> \text{or} = 200 \text{mg/dl}$ 148 (33.0) and 93 (32.7), low HDL cholesterol $< 40/50 \text{mg/dl}$ 113 (25.1) and 157 (55.3), diabetes 62 (15.5) and 25 (10.8) and metabolic syndrome 109 (25.1) and 61 (22.0). Age-associated increase was observed in body mass index, waist size, waist:hip, systolic blood pressure and fasting and total cholesterol, non-HDL cholesterol and triglycerides in women (Ptrend $< 0.01$). Age related increase was also observed in prevalence of obesity, truncal obesity, hypertension, diabetes and metabolic syndrome (Ptrend $< 0.01$). On univariate analysis significant determinants of risk factors were low educational and socioeconomic status for smoking, high fat diet for obesity and hypertension, low fruits and vegetables intake for metabolic syndrome and low physical activity or obesity but on age-and sex-adjusted multivariate analysis only association was high fat diet with obesity and hypertension (logistic regression analysis p $< 0.05$). Compared to studies performed at similar locations in years 2002-03 and 2005-06 there was increasing trend in prevalence of high non-HDL cholesterol and hypertriglyceridemia (Ptrend $< 0.05$) while other risk factors did not change significantly.

CONCLUSIONS: There is a high prevalence of multiple cardiovascular risk factors in Indian middle class individuals. Secular trends demonstrate a persistent high prevalence and increasing non-HDL cholesterol and triglycerides over 8-year period.

PMID: 22799108 [PubMed - indexed for MEDLINE]


Abstract

BACKGROUND: Warning labels on tobacco products provide an effective way of communicating the consequences of tobacco use. Research has shown that larger and colorful warnings placed on packaging are more effective for informing consumers and general public. However, primarily due to powerful lobbying by the industry, pictorial health warnings in India experienced constant delay in introduction and dilution of content. The current warnings appearing on tobacco products consist of drawing of a scorpion on smokeless forms of tobacco and pictures and X-rays of diseased lungs for smoking forms.

METHODOLOGY: To understand people’s attitude towards the pictorial warning and their understanding of the pictures, a study was planned in two phases. The first phase was qualitative with focus group discussion and second, a population based survey for validating the findings.

RESULTS: The findings of the study suggested that the mandated pictorial warnings do not serve the desired purpose since they are not properly understood. The scorpion becomes associated with the product in a non-scientific manner. X-rays of lung are hardly understood by anybody and pictures of diseased lungs are not used by tobacco manufacturers.

CONCLUSION: The results of both the focus group discussions and the field survey indicate that most people have seen text and pictorial warnings on smokeless and smoking tobacco products, but that they lack relevance to the text messages. Irrespective of education the early proposed pictorial warnings by the government were more effective than the currently implemented warnings. People would like to see the warnings mainly in Hindi and Marathi (local language) and want them to be placed on the top or middle of both sides of tobacco packaging.

PMID: 21517243 [PubMed - indexed for MEDLINE]

India

Abstract

OBJECTIVE: To quantify the impact of tobacco use and the related medical expenditure on poverty in India.

METHODS: Tobacco expenditure and associated medical expenditure attributable to tobacco use were subtracted from the household monthly consumption expenditure in order to derive an appropriate measure of household disposable income. The 2004 National Sample Survey, a nationally representative survey of Indian households, was used to estimate the true level of poverty.

RESULTS: Our estimates indicate that accounting for direct expenditure on tobacco would increase the rural and the urban poverty rates by 1.5% (affecting 11.8 million people) and 0.72% (affecting 2.3 million people), respectively. Similarly, the out-of-pocket costs of tobacco-attributable medical care result in 0.09% higher poverty rates in rural areas (affecting 0.7 million people) and in 0.07% higher poverty rates in urban locations (affecting 0.23 million people).

CONCLUSIONS: Tobacco consumption impoverishes roughly 15 million people in India. Hence tobacco control measures would not only improve public health, but would also reduce poverty in India.


Abstract

The beedi industry occupies a prominent place in rural development in terms of its capacity to offer potential employment opportunities to a large number of people. For the beedi industry Tamilnadu is one of the major hub in India. It is estimated that around one million workers mostly woman and children are employed in Beedi making. It is an arduous, labour intensive task because each beedi is rolled individually. Beedi industry is almost an unorganized sector hence even the government officials finding it difficult to enforce the various legal requirements. Apart from the other legal implications the health hazards which the women employees who are rolling the beedis are enormous. This study aims to explore the level of health hazards experienced by the woman beedi rollers in Tamilnadu. A total of 388 usable responses obtained from women beedi rollers comprising from the beedi rollers concentrated districts i.e., Tirunelveli, Tuticorin, Tiruchirappalli &Vellore are used for this study. The study found that more than 70% of the beedi rollers suffered from eye, gastrointestinal and nervous problems while more than 50% of the respondents suffered from respiratory problems, mostly throat burning and cough. More than 75%of the respondents faced osteological problems. From the study it is understood that the health hazards level is very high. This study proposes a framework to be implemented with the Government agencies, NGOs and Welfare organizations for the welfare of the beedi rollers.


Abstract

Aim: A study was carried out to understand the process of interference by the tobacco industry, to measure the compliance of the industry for displaying pictorial warnings on a tobacco product as per the packaging and labeling rules post 31st May, 2009, and to understand the public opinion on the messages conveyed through such warnings.

Materials and methods: A total of 60 samples of tobacco products were purchased after 31 May, 2009, from the retail vendors of tobacco sellers across the country.

Results: The government of India has from time to time, taken measures, including legislations, to control tobacco consumption. The actual implementation of these rules has been postponed repeatedly, apparently because of constant pressure exerted by the tobacco industry. The skull and bone sign hurting religious sentiments as stated by the group of ministers proved to be misleading. Later the Group of Ministers (GOM) proposed three very weak and poorly communicative pictorial health warnings to replace those recommended by the Union Health Ministry based on the inputs of the Department of Audio Visual Publicity (DAVP). The industry tried to use strategic means by displaying a dull, diluted, and watered down pictorial warning. The focus group study conducted showed that a scorpion gets associated with the product in a non-scientific manner. X-ray of the lung was hardly understood by anybody.
Conclusion: Overall the tobacco industry has constantly flouted with the law right from the policy level to its implementation by displaying dull, diluted, and poorly informed pictorial warnings.

PMID: 20622423 [PubMed - indexed for MEDLINE]


Abstract

We studied the health problems of 197 female beedi rollers in Patna, Bihar, India to ascertain the effects of beedi rolling on health. The study found that more than 70% of the beedi rollers suffered from eye, gastrointestinal and nervous problems while more than 50% of the respondents suffered from respiratory problems, mostly throat burning and cough. More than 75% of the respondents faced osteological problems. Total RBC, WBC and platelet counts of the beedi rollers were significantly lower in comparison to the control subjects. Differential leucocyte count showed significantly risen lymphocytes and eosinophils and lowered neutrophils and monocytes in the beedi rollers as compared to the control group. Haemoglobin levels were lower among beedi rollers compared to the control group. SGPT (ALT) enzyme concentration, a parameter of liver dysfunction was significantly higher in the beedi rollers as compared to the control group. Thus, the study concluded that beedi rolling may cause significant health hazards.

PMID: 20512312 [PubMed - indexed for MEDLINE]


Abstract

OBJECTIVE: To estimate the tobacco-attributable costs of diseases separately for smoked and smokeless tobacco use in India.

METHODS: The prevalence-based attributable-risk approach was used to estimate the economic cost of tobacco using healthcare expenditure data from the National Sample Survey, a nationally representative household sample survey conducted in India in 2004. Four major categories of tobacco-related disease—tuberculosis, respiratory diseases, cardiovascular diseases and neoplasms—were considered.

RESULTS: Direct medical costs of treating tobacco related diseases in India amounted to $907 million for smoked tobacco and $285 million for smokeless tobacco. The indirect morbidity costs of tobacco use, which includes the cost of caregivers and value of work loss due to illness, amounted to $398 million for smoked tobacco and $104 million for smokeless tobacco. The total economic cost of tobacco use amounted to $1.7 billion. Tuberculosis accounted for 18% of tobacco-related costs ($311 million) in India. Of the total cost of tobacco, 88% was attributed to men.

CONCLUSIONS: The cost of tobacco use was many times more than the expenditures on tobacco control by the government of India and about 16% more than the total tax revenue from tobacco. The tobacco-attributable cost of tuberculosis was three times higher than the expenditure on tuberculosis control in India. The economic costs estimated here do not include the costs of premature mortality from tobacco use, which is known to comprise roughly 50% to 80% of the total economic cost of tobacco in many countries.

PMID:19131453[PubMed - indexed for MEDLINE] PMCID:PMC2655042


Abstract

Poverty and health have a two-way relationship. Poverty increases the vulnerability of people to disease, and sickness affects their income leading to poverty. Tobacco has been identified as a major avoidable cause of
illness and premature death. In India, more than half of men and one-tenth of women use one or more forms of
tobacco. Tobacco-use shows a clear and continual increase with decreasing wealth quintiles. Poor smokers, who
are at a greater risk of illness, are also at a greater risk of not being treated or of falling into greater poverty if they
seek treatment. Poor people spend money on tobacco that could be spent on food, shelter, education, and
healthcare. These decisions can entrench families in an ongoing cycle of poverty and ill-health. The direct and
indirect costs of tobacco-use are immense for national economy. This has positioned control of tobacco relevant
in India’s per suite to achieve the goals of poverty eradication and health for all.


Garg CC, Karan AK. Reducing out-of-pocket expenditures to reduce poverty: a disaggregated analysis at
Epub 2008 Dec 17.

Abstract

Out-of-pocket (OOP) expenditure on health care has significant implications for poverty in many developing
countries. This paper aims to assess the differential impact of OOP expenditure and its components, such as
expenditure on inpatient care, outpatient care and on drugs, across different income quintiles, between
developed and less developed regions in India. It also attempts to measure poverty at disaggregated rural-urban
and state levels. Based on Consumer Expenditure Survey (CES) data from the National Sample Survey (NSS),
conducted in 1999-2000, the share of households’ expenditure on health services and drugs was calculated. The
number of individuals below the state-specific rural and urban poverty line in 17 major states, with and without
netting out OOP expenditure, was determined. This also enabled the calculation of the poverty gap or poverty
depthening in each region. Estimates show that OOP expenditure is about 5% of total household expenditure
(ranging from about 2% in Assam to almost 7% in Kerala) with a higher proportion being recorded in rural areas
and affluent states. Purchase of drugs constitutes 70% of the total OOP expenditure. Approximately 32.5 million
persons fell below the poverty line in 1999-2000 through OOP payments, implying that the overall poverty
increase after accounting for OOP expenditure is 3.2% (as against a rise of 2.2% shown in earlier literature).
Also, the poverty headcount increase and poverty deepening is much higher in poorer states and rural areas
compared with affluent states and urban areas, except in the case of Maharashtra. High OOP payment share in
total health expenditures did not always imply a high poverty headcount; state-specific economic and social
factors played a role. The paper argues for better methods of capturing drugs expenditure in household surveys
and recommends that special attention be paid to expenditures on drugs, in particular for the poor. Targeted
policies in just five poor states to reduce OOP expenditure could help to prevent almost 60% of the poverty
headcount increase through OOP payments

PMID:19095685[PubMed - indexed for MEDLINE]

Mamudu HM, Hammond R, Glantz S. Tobacco industry attempts to counter the World Bank report Curbing
the Epidemic and obstruct the WHO framework convention on tobacco control. Soc Sci Med. 2008 Dec;

Abstract

In 1999 the World Bank published a landmark study on the economics of tobacco control, Curbing the Epidemic:
Governments and the Economics of Tobacco Control (CTE), which concluded that tobacco control brings
unprecedented health benefits without harming economies, threatening the transnational tobacco companies’
ability to use economic arguments to dissuade governments from enacting tobacco control policies and
supporting the WHO Framework Convention on Tobacco Control (FCTC). We used tobacco industry documents
to analyze how tobacco companies worked to discredit CTE. They hired public relations firms, had academics
critique CTE, hired consultants to produce "independent" estimates of the importance of tobacco to national
economies, and worked through front groups, particularly the International Tobacco Growers’ Association, to
question CTE’s findings. These efforts failed, and the report remains an authoritative economic analysis of global
tobacco control during the ongoing FCTC negotiations. The industry’s failure suggests that the World Bank
should continue their analytic work on the economics of tobacco control and make tobacco control part of its
development agenda.

PMID: 18950924 [PubMed - indexed for MEDLINE] PMCID: PMC2662513(India mentioned in full text)

**Abstract**

This paper examines whether spending on tobacco crowds out expenditure on basic needs and whether it has implications on nutrition intake and household resource allocation in India. The paper uses a household sample survey from India for the year 1999–2000. A system of quadratic conditional Engel curves was estimated for a set of 10 broad groups of commodities. The results suggest that tobacco consuming households had lower consumption of certain commodities such as milk, education, clean fuels and entertainment which may have more direct bearing on women and children in the household than on men suggesting possible ‘gender effects’ and biases in the allocation of goods and services within the household. Tobacco spending was also found to have negative effects on per capita nutrition intake. The nature of crowding out was found to be similar in low- and high-income households.

PMID: 18187245 [PubMed - indexed for MEDLINE] (India mentioned in full text)


**Abstract**

**BACKGROUND:** Identifying social disparities in patterns of tobacco use with regard to education, occupation, and gender characteristics can provide valuable insights into the tobacco use patterns of the population.

**AIM:** We assessed social disparities in tobacco use, smoking, and smokeless tobacco use by examining occupation-, education-, and gender-specific patterns.

**SETTING:** About 69,030 Indian residents ≥15 years in 29 States and 2 Union Territories (UT).

**DESIGN:** Three-stage sampling in urban areas and two-stage sampling in rural areas for selection of households.

**MATERIALS AND METHODS:** Data has been derived from GATS 2009-2010, wherein the sample was collected through household interviews.

**STATISTICAL ANALYSIS:** Percentages, proportions, adjusted odds ratios (ORs), and 95% confidence interval (CI) were reported.

**RESULTS:** As a person entered adulthood, the prevalence of ever tobacco use increased by 51.5% among men and 28.8% among women. Prevalence was 2.5 times higher in men (mainly smoking) as compared to women (predominantly smokeless form). ORs for tobacco use were higher among illiterate respondents as compared to the college educated (male OR = 4.23, female OR = 8.15). Unemployed, able to work (male OR = 1.50, female OR = 1.23) showed highest risk, while students (male OR = 0.35, female OR = 0.52) showed the least. The combined effect of occupation and education showed synergistic interaction among females and antagonistic interaction among males.

**CONCLUSION:** The study clearly underscores the individual and joint effects of education and occupation on tobacco use besides discussing variations based on gender. This can have far-reaching policy implications in addressing disparities in tobacco use.

PMID:23442405[PubMed - indexed for MEDLINE]

Abstract

Chronic exposure to tobacco dust causes nasal inhalation and cutaneous absorption of tobacco alkaloids especially nicotine, therefore the considerable evidences showed that workers employed in bidi industries are at risk of cancer, lung diseases and other many health related common problems. Many references revealed that tobacco dust exposure induces mutations, damage to DNA etc. which are supposed to be the consequences of free radical generation. In present study attempt have been made to evaluate the status of oxidants and antioxidants and their relation with nicotine. 90 bidi workers were screened for serum lipid peroxide (MDA) and serum nitric oxide (NO*) as oxidant and erythrocytic-Superoxide Dismutase (RBC-SOD), Vitamin-C as antioxidant. Total antioxidant capacity (TAC) and urinary cotinine were also measured. These bidi workers were further divided in 3 groups, Group 1, 11 and III exposed to tobacco dust for about 10 to 14 yrs, 15 to 19 yrs and 20 to 24 yrs of exposure respectively. Highly significant excretion of Urinary cotinine was found in all groups of bidi workers as compared with control (p < 0.001). The levels of MDA, and NO* were found to be significantly elevated in all the three groups with progression of exposure, than the control (p < 0.001), where as the levels of RBC-SOD, Vitamin-C and TAC were significantly decreased in all the three groups as compared with controls (p < 0.001). From our findings it is evident that nicotine absorption might contribute to the disturbed oxidant and antioxidant balance leading to oxidative stress.

PMID:17444052[PubMed - indexed for MEDLINE]


Abstract

Cigarette smoking and other forms of tobacco use impose a large and growing global public health burden. Worldwide, tobacco use is estimated to kill about 5 million people annually, accounting for 1 in every 5 male deaths and 1 in 20 female deaths of those over age 30. On current smoking patterns, annual tobacco deaths will rise to 10 million by 2030. The 21st century is likely to see 1 billion tobacco deaths, most of them in low-income countries. In contrast, the 20th century saw 100 million tobacco deaths, most of them in Western countries and the former socialist economies. Hundreds of millions of premature tobacco deaths could be avoided if effective interventions were widely applied in low- and middle-income countries. Numerous studies from high-income countries and a growing number from low- and middle-income countries provide robust evidence that tobacco tax increases, timely dissemination of information about the health risks of smoking, restrictions on smoking in public and workplaces, comprehensive bans on advertising and promotion, and increased access to cessation therapies are effective in reducing tobacco use and its consequences. Cessation by the 1.1 billion current smokers is central to meaningful reductions in tobacco deaths over the next five decades. New analyses presented here find that higher tobacco taxes could prevent 3 million tobacco deaths by 2030 among smokers alive today. Reduced uptake of smoking by children would yield benefits chiefly after 2050. Price and non-price interventions are, for the most part, highly cost-effective. This chapter begins with an overview of smoking trends and tobacco's health consequences, followed by a discussion of the economic rationale for government intervention, with a focus on the uniquely addictive properties of nicotine. A review of the effectiveness of tobacco-control policies in reducing tobacco initiation and in increasing cessation follows. A cost-effectiveness analysis of these interventions is provided. Finally, the constraints to implementing tobacco-control policies are discussed.

PMID: 21250321[PubMed]


Abstract

Health related behaviours, especially smoking and tobacco use, are major determinants of health and lead to health inequities. Smoking leads to acute respiratory diseases, tuberculosis and asthma in younger age groups and non communicable diseases such as chronic lung disease, cardiovascular diseases and cancer in middle and older age. We observed an inverse association of educational status with tobacco use (smoking and other forms) in western Indian State of Rajasthan. In successive cross-sectional epidemiological studies- the Jaipur Heart Watch (JHW)- in rural (JHWR; n=3148, men=1982), and urban subjects: JHW-1 (n=2212, men=1415), JHW-2 (n=1124, men=556) and JHW-3 (n=458, men=226), we evaluated various cardiovascular risk factors. The greatest tobacco consumption was observed among the illiterate and low educational status subjects (nil, 1-5, 6-10, >10 yr of formal education) as compared to more literate in men (JHW-R 60, 51, 46 and 36% respectively; JHW-1 44, 52, 30 and 18% JHW-2 54, 43, 29 and 24%; and JHW-3 50, 27, 25 and 25%) as well as women (Mantel Haenzel test, P for trend <0.05). In the illiterate subjects the odds ratios (OR) and 95 per cent confidence intervals (CI) for smoking or tobacco use as compared to the highest educational groups in rural (men OR 2.68,
Interventions were widely applied in low- and middle-income countries. Numerous studies from high-income countries. In contrast, the 20th century saw 100 million tobacco deaths, most of them in Western countries and the rise to 10 million by 2030. The 21st century is likely to see 1 billion tobacco deaths, most of them in low-income deaths and 1 in 20 female deaths of those over age 30. On current smoking patterns, annual tobacco deaths will be elevated in all the three groups with progression of exposure, than the control (p < 0.001), whereas the levels of MDA, and NO* were found to be significantly higher in bidi workers as compared with control (p < 0.001). The levels of MDA, and NO* were found to be significantly higher in bidi workers as compared with control (p < 0.001). The excretion of Urinary cotinine was found in all groups of smokers.

Worldwide, tobacco use is estimated to kill about 5 million people annually, accounting for 1 in every 5 male deaths and 1 in 20 female deaths of those over age 30. On current smoking patterns, annual tobacco deaths will be elevated in all the three groups with progression of exposure, than the control (p < 0.001), whereas the levels of MDA, and NO* were found to be significantly higher in bidi workers as compared with control (p < 0.001). The levels of MDA, and NO* were found to be significantly higher in bidi workers as compared with control (p < 0.001). The excretion of Urinary cotinine was found in all groups of smokers.

Abstract

This paper presents the findings of a critical review of studies carried out in low- and middle-income countries (LMICs) focusing on the economic consequences for households of illness and health care use. These include household level impacts of direct costs (medical treatment and related financial costs), indirect costs (productive time losses resulting from illness) and subsequent household responses. It highlights that health care financing strategies that place considerable emphasis on out-of-pocket payments can impoverish households. There is growing evidence of households being pushed into poverty or forced into deeper poverty when faced with substantial medical expenses, particularly when combined with a loss of household income due to ill-health.

Health sector reforms in LMICs since the late 1980s have particularly focused on promoting user fees for public sector health services and increasing the role of the private for-profit sector in health care provision. This has increasingly placed the burden of paying for health care on individuals experiencing poor health. This trend seems to continue despite some countries and international organisations considering a shift away from their previous pro-user fee agenda. Research into alternative health care financing strategies and related mechanisms for coping with the direct and indirect costs of illness is urgently required to inform the development of appropriate social policies to improve access to essential health services and break the vicious cycle between illness and poverty.

Abstract

This study provides national estimates of regular tobacco and alcohol use in India and their associations with gender, age, and economic group obtained from a representative survey of 471,143 people over the age of 10 years in 1995-96, the National Sample Survey. The national prevalence of regular use of smoking tobacco is estimated to be 16.2%, chewing tobacco 14.0%, and alcohol 4.5%. Men were 25.5 times more likely than women to report regular smoking, 3.7 times more likely to regularly chew tobacco, and 9.7 times more likely to regularly use alcohol. Respondents belonging to scheduled castes and tribes (recognized disadvantaged groups) were significantly more likely to report regular use of alcohol as well as smoking and chewing tobacco. People from rural areas had higher rates compared to urban dwellers, as did those with no formal education. Individuals with incomes below the poverty line had higher relative odds of use of chewing tobacco and alcohol compared to those above the poverty line. The regular use of both tobacco and alcohol also increased significantly with each diminishing income quintile. Comparisons are made between these results and those found in the United States and elsewhere, highlighting the need to address control of these substances on the public health agenda.

Abstract


Abstract


Abstract

The study investigates the association between tobacco and alcohol use, and the potential risk of impoverishment from borrowing and distress selling of assets for meeting costs of hospitalization in India. Data from the fifty-second round of the National Sample Survey, a representative survey of 120,942 households across India, were used to investigate the likelihood and the levels of borrowing and distress selling of assets to cover hospitalization expenditures among regular users of tobacco and/or alcohol, non-users from households where there was use, and non-users from households with no use. The data were analyzed by bivariate comparisons and multivariate logistic and ordinary least square regression. The study found a higher risk of borrowing/distress selling during hospitalization for individuals who use tobacco (OR 1.35, p<0.05), who were non-users but belong to households that use tobacco (OR 1.38, p<0.05), and non-users from households that use both tobacco and alcohol (OR 1.51, p<0.05), even after controlling for socio-economic and demographic factors. The same groups also met a higher percentage of hospitalization expenditures through borrowing/distress selling of assets. The adjusted population-attributable risk proportion of borrowing/distress selling to meet hospital expenditures for tobacco and alcohol use was 16%. The study suggests that there is an association between use of tobacco and alcohol, and impoverishment through borrowing and distress selling of assets due to costs of hospitalization. While reduction of poverty is the overarching goal of developing countries and multilateral development organizations, very little is mentioned about control of tobacco and alcohol in the framework of development. It might be necessary to include strategies for control of tobacco and alcohol in the larger framework of poverty reduction.

PMID:15689429 [PubMed - indexed for MEDLINE]


Abstract

OBJECTIVE: To investigate the demographic, socioeconomic, and geographical distribution of tobacco consumption in India.


SETTING: Indian states.

PARTICIPANTS: 301 984 adults (> or = 18 years).

MAIN OUTCOME MEASURES: Dichotomous variable for smoking and chewing tobacco for each respondent (1 if yes, 0 if no) as well as a combined measure of whether an individual smokes, chews tobacco, or both.

RESULTS: Smoking and chewing tobacco are systematically associated with socioeconomic markers at the individual and household level. Individuals with no education are 2.69 times more likely to smoke and chew tobacco than those with postgraduate education. Households belonging to the lowest fifth of a standard of living index were 2.54 times more likely to consume tobacco than those in the highest fifth. Scheduled tribes (odds ratio 1.23, 95% confidence interval 1.18 to 1.29) and scheduled castes (1.19, 1.16 to 1.23) were more likely to consume tobacco than other caste groups. The socioeconomic differences are more marked for smoking than for chewing tobacco. Socioeconomic markers and demographic characteristics of individuals and households do not account fully for the differences at the level of state, district, and village in smoking and chewing tobacco, with state accounting for the bulk of the variation in tobacco consumption.

CONCLUSION: The distribution of tobacco consumption is likely to maintain, and perhaps increase, the current considerable socioeconomic differentials in health in India. Interventions aimed at influencing change in tobacco consumption should consider the socioeconomic and geographical determinants of people's susceptibility to consume tobacco.

PMID: 15070637 [PubMed - indexed for MEDLINE] PMCID: PMC383376
1. Tobacco use Surveillance (surveys and reports)

1.1. Youth in general


Abstract

The World Health Organization (WHO), Centers for Disease Control and Prevention (CDC), and Canadian Public Health Association (CPHA) developed the Global Tobacco Surveillance System (GTSS) to assist all 192 WHO Member States in collecting data on youth and adult tobacco use. The flexible GTSS system includes common data items but allows countries to include important unique information at their discretion. It uses a common survey methodology, similar field procedures for data collection, and similar data management and processing techniques. The GTSS includes collection of data through three surveys: the Global Youth Tobacco Survey (GYTS) for youth, and the Global School Personnel Survey (GSPS) and the Global Health Professional Survey (GHPS) for adults. GTSS data potentially can be applied in four ways. First, countries and research partners can disseminate data through publications, presentations, and an active GTSS web site. Second, countries can use GTSS data to inform politicians about the tobacco problem in their country, leading to new policy decisions to prevent and control tobacco use. Third, GTSS can provide countries with valuable feedback to evaluate and improve Country National Action Plans or develop new plans. Fourth, in response to the WHO FCTC call for countries to use consistent methods and procedures in their surveillance efforts, GTSS offers such consistency in sampling procedures, core questionnaire items, training field procedures, and analysis of data across all survey sites. The GTSS represents the most comprehensive tobacco surveillance system ever developed and implemented. As an example, this paper describes development of the GYTS and discusses potential uses of the data. Sample data were drawn from 38 sites in 24 countries in the African Region, 82 sites in 35 countries in the Americas Region, 20 sites in 17 countries and the Gaza Strip/West Bank region in the Eastern Mediterranean Region, 25 sites in 22 countries in the European Region, 34 sites in six countries in the Southeast Asia Region, and 25 sites in 14 countries in the Western Pacific Region.

PMID: 15779140[PubMed - indexed for MEDLINE]


Abstract

This paper examines the prevalence of smoking, the age pattern of initiation of smoking, and factors associated with current smoking status among 15–19 year olds in five Asian societies, using data from large-scale youth surveys. The life-table method is used to examine the age pattern of initiation of smoking and logistic regression is used to examine factors associated with current smoking status. Smoking prevalence is high among boys but very low among girls. Among boys, 82 percent in Indonesia, 73 percent in Thailand, 70 percent in the Philippines, and 35 percent in Nepal begin smoking by age 20. In all countries, smoking is much more prevalent among teens who have experienced some transitions to adulthood. In Indonesia and Nepal, teen smoking is more prevalent in less developed regions. Among Filipino girls, residence in metro Manila is associated with high probability of smoking. In most countries, teens who have close relationships with parents are less likely to smoke.

1.1.1. Global Youth Tobacco Survey (GYTS)

Indonesia


Abstract

BACKGROUND: At least two rounds of the Global Youth Tobacco Survey (GYTS) have been completed in most of the countries in the World Health Organization South-East Asia region. Comparing findings from these two rounds provides trend data on smokeless tobacco (SLT) use for the first time.

METHODS: This study uses GYTS data from Bangladesh, Bhutan, India, Indonesia, Maldives, Myanmar, Nepal, Sri Lanka, Thailand, and Timor-Leste during 2006-2013. GYTS is a nationally representative survey of 13-15-year-old students using a consistent and standard protocol. Current SLT use is defined as using any kind of SLT products, such as chewing betel quid or non betel quid or snuffing any other products orally or through the nasal route, during the 30 days preceding the survey. Prevalence and 95% confidence intervals were computed using SAS/SUDAAN software.

RESULTS: According to most recent GYTS data available in each country, the prevalence of current use of SLT among youth varied from 5.7% in Thailand to 23.2% in Bhutan; among boys, from 7.1% in Bangladesh to 27.2% in Bhutan; and among girls, from 3.7% in Bangladesh to 19.8% in Bhutan. Prevalence of SLT was reported significantly higher among boys than girls in Bhutan (boys 27.2%; girls 19.8%), India (boys 11.1%; girls 6.0%), Maldives (boys 9.2%; girls 2.9%), Myanmar (boys 15.2%; girls 4.0%), and Sri Lanka (boys 13.0%; girls 4.1%). Prevalence of current SLT use increased in Bhutan from 9.4% in 2009 to 23.2% in 2013, and in Nepal from 6.1% in 2007 to 16.2% in 2011.

CONCLUSION: The findings call for countries to implement corrective measures through strengthened policy and enforcement.

PMID: 25526249 [PubMed - in process]


Abstract

Tobacco is an important public health problem in Indonesia since Indonesia is the 5th biggest cigarettes consumption in the world (1). Our National Health Survey 2004 data showed that 34.5% of Indonesians are smokers, suggesting there are more than 60 million smokers in Indonesia. The tobacco control program in Indonesia is not comprehensively available to combat the tobacco problem. One important tool for strengthen in the tobacco control in Indonesia as well as law formulating process is the availability of data. The Global Youth Tobacco Survey (GYTS) was developed to provide data on youth tobacco use to countries for their development of youth based tobacco control programs. Data in this report can be used as baseline measures for future evaluation of the tobacco control programs implemented by the Ministry of Health. This 2006 Indonesia GYTS report show that more than 1 in 10 (12.6%) students currently smoke cigarettes with boys (24.5%) significantly higher than girls (2.3%). Among the current smokers students, over 7 in 10 (75.9%) of them report that they desire to stop smoking now. Regarding SHS, over 6 in 10 (64.2%) students reported they were exposed to smoke from others in their home during the week before the survey. In the impact of media, over 9 in 10 (92.9%) students had seen a lot of advertisements for cigarettes on billboards in the past month and over 8 in 10 (82.8%) had seen a lot of advertisements for cigarettes in newspapers or in magazines. Tobacco control in Indonesia will likely not move forward until the government evaluates and strengthens existing laws, considers passing new strong laws, and develops protocols for enforcing all laws. The Indonesian government also should strongly consider accession to the WHO FCTC.


Abstract not available
1.1.2. Global Adult Tobacco Surveys (GATS)


Abstract

Introduction: Tobacco use is a leading cause of deaths and Disability Adjusted Life Years lost worldwide, particularly in South-East Asia. Health risks associated with exclusive use of one form of tobacco alone has a different health risk profile when compared to dual use. In order to tease out specific profiles of mutually exclusive categories of tobacco use, we carried out this analysis. Methods: The Global Adult Tobacco Survey (GATS) data was used to describe the profiles of three mutually exclusive tobacco use categories ("Current smoking only," "Current smokeless tobacco [SLT] use only," and "Dual use") in four World Health Organization South-East Asia Region countries, namely Bangladesh, India, Indonesia and Thailand. GATS were a nationally representative household-based survey that used a stratified multistage cluster sampling design proportional to population size. Prevalence of different forms of usage were described as proportions. Logistics regression analyses were performed to calculate odds ratios (OR) with 95% confidence intervals. All analyses were weighted, accounted for the complex sampling design and conducted using SPSS version 18. Results: The prevalence of different forms of tobacco use varied across countries. Current tobacco use ranged from 27.2% in Thailand to 43.3% in Bangladesh. Exclusively smoking was more common in Indonesia (34.0%) and Thailand (23.4%) and less common in Bangladesh (16.1%) and India (8.7%). Exclusively using SLT was more common in Bangladesh (20.3%) and India (20.6%) and less common on Indonesia (0.9%) and Thailand (3.5%). Dual use of smoking and SLT was found in Bangladesh (6.8%) and India (5.3%), but was negligible in Indonesia (0.8) and Thailand (0.4%). Gender, age, education and wealth had significant effects on the OR for most forms of tobacco use across all four countries with the exceptions of SLT use in Indonesia and dual use in both Indonesia and Thailand. In general, the different forms of tobacco use increased among males and with increasing age; and decreased with higher education and wealth. The results for urban versus rural residence were mixed and frequently not significant once controlling for the other demographic factors. Conclusion: This study addressed the socioeconomic disparities, which underlie health inequities due to tobacco use. Tobacco control activities in these countries should take in account local cultural, social and demographic factors for successful implementation.

PMID: 25526244 [PubMed - in process]


Abstract- Not Available


Abstract not available

1.2. Children (including school going children)


Abstract

Children contribute substantially to the workforce needed to produce tobacco in Indonesia. Drawing on 18 months of ethnographic fieldwork, I discuss the reasons behind children’s economic involvement in tobacco cultivation in the eastern region of the island of Lombok in eastern Indonesia. I explore children’s paid work in the plantations by looking at the three dimensions of their economic lives: the local economy, their households and their individual lives. I address the tension between children’s agency and the systems that constrain it.


Abstract

BACKGROUND: The Association of Southeast Asian Nations (ASEAN) has made tobacco use prevention a primary health issue. All ASEAN countries except Indonesia have ratified the World Health Organization
Framework Convention on Tobacco Control (WHO FCTC), the world's first public health treaty on tobacco control.

**METHODS:** Global Youth Tobacco Survey (GYTS) data were collected from representative samples of students in school grades associated with ages 13-15 in Cambodia, Indonesia, Laos (Vientiane), Malaysia, Myanmar, Philippines, Singapore, Thailand and Vietnam (Hanoi).

**RESULTS:**

Current cigarette smoking ranged from less than 5% (Vietnam and Cambodia) to 20.2% in Malaysia. Current use of tobacco products other than cigarettes was less than 10% in all countries. Boys were significantly more likely than girls to smoke cigarettes or use other tobacco products. Exposure to second-hand smoke in public places was greater than 50%, direct pro-tobacco advertising exposure was greater than 75% and over 10% of students were exposed to indirect advertising. Over 60% of students who currently smoked cigarettes wanted to stop, but 80% who tried to quit in the year prior to the survey failed.

**CONCLUSIONS:** Efforts to reduce the current and projected harm caused by tobacco use in the ASEAN countries are urgently needed. ASEAN countries need to expand their national comprehensive tobacco prevention and control programs and enforce those laws already passed. Without this effort little reduction can be expected in the burden of chronic diseases and tobacco-related mortality.

PMID: 18669557 [PubMed - indexed for MEDLINE]

Ng N, Weinehall L, Ohman A. ‘If I don't smoke, I'm not a real man'--Indonesian teenage boys' views about smoking. Health Educ Res. 2007 Dec; 22(6):794-804. Epub 2006 Sep 20.

Abstract

With a lack of tobacco control and regulation at the national level, Indonesia has been targeted by many national and transnational tobacco companies. The prevalence of youth smokers in Indonesia in 2005 was 38% among boys and 5.3% among girls. The aim of this study was to describe and analyse beliefs, norms and values about smoking among teenage boys in a rural setting in Java, Indonesia. Six focus group discussions with boys aged 13–17 years were conducted using a thematic discussion guide. Four themes were derived from the descriptive content analysis: (i) smoking as a culturally internalized habit, (ii) striving to become a man, (iii) the way we smoke is not dangerous and (iv) the struggle against dependency. Cultural resistance against women smoking in Indonesia remains strong. The use of tobacco in the construction of masculinity underlines the importance of gender-specific intervention.

National tobacco control policy should emphasize a smoking-free society as the norm, especially among boys and men, and regulations regarding the banning of smoking should be enforced at all levels and areas of community. A comprehensive community intervention programme on smoking prevention and cessation should be a major focus of tobacco control policies in Indonesia.

PMID: 16987943 [PubMed - indexed for MEDLINE]

1.3. Health professionals (including medical and dental students)


Abstract

Smoking tobacco is a habit of individuals. Determinants of smoking behavior are multiple factors both within the individual and in the social environment around the individual. Staff smoking has been an undesirable phenomenon at Dr. Zainoel Abidin Provincial General Hospital in Banda Aceh. Health promotion efforts are a strategy that has resulted in behavioral changes with reductions in smoking by staff. This action research was designed to analyze changes in smoking behavior of hospital staff. The sample for this research was all 152 male staff who were smokers. The results of this research showed that Health Promotion Interventions (HPI) consisting of personal empowerment plus social support and advocacy to improve employee knowledge and attitudes influenced staff to stop or to significantly. HPI employed included counseling programs, distribution of
antismoking leaflets, putting up antismoking posters, and installation of no smoking signs. These HPI proved effective to increase knowledge and create a positive attitude to nonsmoking that resulted in major reductions in smoking by staff when offsite and complete cessation of smoking whilst in the hospital. Continuous evaluation, monitoring, and strengthening of policies banning smoking should be maintained in all hospitals.


Abstract

OBJECTIVE: To explore Indonesian physician’s smoking behaviours, their attitudes and clinical practices towards smoking cessation.

RESULTS: 22% of male (n=50) and 1% of female (n=2) physicians were current smokers. Approximately 72% of physicians did not routinely ask about their patient’s smoking status. A majority of physicians (80%) believed that smoking up to 10 cigarettes a day was not harmful for health. The predictors for asking patients about smoking were being male, a non-smoker and a medical resident. The odds of advising patients to quit were significantly greater among physicians who perceived themselves as sufficiently trained in smoking cessation.

CONCLUSIONS: Lack of training in smoking cessation seems to be a major obstacle to physicians actively engaging in smoking cessation activities. Indonesian physicians need to be educated on the importance of routinely asking their patients about their tobacco use and offering practical advice on how to quit smoking.

PMID: 17565139 [PubMed - indexed for MEDLINE] PMCID: PMC2598505


Abstract

BACKGROUND: Smoking remains the major preventable cause of death worldwide, especially cancer-related death. Evidence clearly indicates that tobacco-related morbidity and mortality is reduced by smoking cessation. Pharmacists are well-positioned to provide tobacco cessation services an involvement of pharmacists in smoking cessation is encouraged by several organizations. While Indonesia’s prevalence of smoking is in the first rank in Asian countries, none of the pharmacy schools in Indonesia are currently offering tobacco-related courses in their existing curricula at present. Our study aimed to develop and to evaluate the effectiveness of tobacco education (TE) for pharmacy students in Indonesia.

MATERIALS AND METHODS: A 6-hour TE was developed and evaluated using pre-test/post-test with control group design. A total of 137 fifth-year pharmacy students at Gadjah Mada University (GMU), Yogyakarta, were chosen as an intervention group while a total of 105 fifth-year students of Islamic University of Indonesia, (Ull) served as the control group. Knowledge, perceived-role, self-efficacy, and ability to perform counseling using the 5A’s framework were evaluated.

RESULTS: A significant improvement (P < 0.001) in knowledge, perceived-role, and self-efficacy was found in the intervention group but not in the control group. In addition, we revealed that 89.7% of the intervention group were able to perform counseling using 5A’s.

CONCLUSIONS: The developed TE significantly improved student knowledge, perceived-role, self-efficacy, and created an ability to perform cessation counseling. Integration of TE education in curricula of Indonesian pharmacy schools nation-wide should be encouraged.

PMID:25605176[PubMed - in process]
1.3.1. Global Health Personnel Student Survey (GHPSS)


Abstract

BACKGROUND: GHPSS is a school-based survey that collects self-administered data from students in regular classroom settings. GHPSS produces representative data at the national or city level in each country. This study aims to investigate the prevalence of tobacco use, exposure to secondhand smoke, and cessation counseling among medical students using the GHPSS data.

METHODS: The Global Health Professions Student Survey (GHPSS) was conducted among 3rd year medical students in 47 countries and the Gaza Strip/West Bank from 2005-2008 to determine the prevalence of tobacco use and amount of formal training in cessation counseling.

RESULTS: In 26 of the 48 sites, over 20% of the students currently smoked cigarettes, with males having higher rates than females in 37 sites. Over 70% of students reported having been exposed to secondhand smoke in public places in 29 of 48 sites. The majority of students recognized that they are role models in society (over 80% in 42 of 48 sites), believed they should receive training on counseling patients to quit using tobacco (over 80% in 41 of 48 sites), but few reported receiving formal training (less than 40% in 46 of 48 sites).

CONCLUSION: Tobacco control efforts must discourage tobacco use among health professionals, promote smoke free workplaces, and implement programs that train medical students in effective cessation-counseling techniques.

PMID: 21284864 [PubMed - indexed for MEDLINE] PMCID: PMC3042391

1.4. Educational Personnel and other professionals


Abstract

BACKGROUND: School-based smoking prevention programs have been shown to increase knowledge of the negative effects of smoking and prevent tobacco smoking. The majority of evidence on effectiveness comes from Western countries. This study investigated the impact of school-based smoking prevention programs on adolescents’ smoking knowledge, attitude, intentions and behaviors (KAIB) in Aceh, Indonesia.

METHODS: We conducted a 2 × 2 factorial randomized controlled trial among 7th and 8th grade students aged 11 to 14 years. Eight schools were randomly assigned to a control group or one of three school-based programs: health-based, Islamic-based, or a combined program. Students in the intervention groups received eight classroom sessions on smoking prevention education over two months. The KAIB impact of the program was measured by questionnaires administered one week before and one week after the intervention.

RESULTS: A total of 477 students participated (58% female, 51% eighth graders). Following the intervention, there was a significant main effect of the Health based intervention for health knowledge scores (β = 3.9 ± 0.6, p < 0.001). There were significant main effects of the Islamic-based intervention in both health knowledge (β = 3.8 ± 0.6, p < 0.001) and Islamic knowledge (β = 3.5 ± 0.5, p < 0.001); an improvement in smoking attitude (β = −7.1 ± 1.5, p < 0.001). The effects of Health and Islam were less than additive for the health and Islamic factors for health knowledge (β = −3.5 ± 0.9, p < 0.01 for interaction) and Islamic knowledge (β = −2.0 ± 0.8, p = 0.02 for interaction). There were no significant effects on the odds of intention to smoke or smoking behaviors.

CONCLUSIONS: Both Health and Islamic school-based smoking prevention programs provided positive effects on health and Islamic related knowledge respectively among adolescents in Indonesia. Tailoring program
interventions with participants’ religion background information may provide additional benefits to health only focused interventions.

1.4.1. Global School Personnel Survey (GSPS)


1.5. Rural communities


Abstract

OBJECTIVE: To gain a better understanding of the health transition in Indonesia, we sought to describe the prevalence and distribution of risk factors for non-communicable diseases and to identify the risk-factor burden among a rural population and an urban population.

METHODS: Using the protocol of the WHO STEPwise approach to Surveillance (STEPS), risk factors for non-communicable diseases were determined for 1502 men and 1461 women aged 15-74 years at the Purworejo Demographic Surveillance Site in 2001.

FINDINGS: Smoking prevalence was high among men (913/1539; weighted percentage=53.9. %) in both rural and urban populations; it was almost non-existent among women. A higher proportion of the urban population and the richest quintile of the rural population had high blood pressure and were classified as being overweight or obese when compared with the poorest quintile of the rural population. Those classified as being in the richest quintile who lived in the rural area were 1.5 times more likely to have raised blood pressure and 8 times more likely to be overweight than those classified as being in the poorest quintile and living in the rural area. Clustering of risk factors was higher among those classified as being in the richest quintile of those living in the rural area compared with those classified as being in the poorest quintile; and the risks of clustering were just 20-30% lower compared with the urban population.

CONCLUSION: Both the rural and urban populations in Purworejo face an unequally distributed burden of risk factors for non-communicable diseases. The burden among the most well-off group in the rural area has already reached a level similar to that found in the urban area. The implementation of the WHO STEPS approach was feasible, and it provides a comprehensive picture of the burden of risk factors, allowing appropriate health interventions to be implemented to address health inequities.

PMc2627311

1.6. Urban communities


Abstract

This paper reports the results of formative and outcome evaluation of two ongoing community-based intervention programmes for integrated non-communicable disease (NCD) prevention and control in urban low-income settings of Ballabgarh near New Delhi, India, and in Depok, West Java Province of Indonesia. At both sites, a coalition of community members facilitated by academic institution and the World Health Organization, planned and implemented the intervention since 2004. The intervention consisted of advocacy and mediation with stakeholders, training of volunteers and school teachers, communication campaigns, risk assessment camps and reorientation of health services. The formative evaluation was based on the review of documents, and outcomes were assessed using the standardized surveys for NCD risk factors in 2003–2004 and 2006–2007. The base line surveys showed that tobacco use, low intake of fruits and vegetable, suboptimal levels of physical activity and obesity were prevalent in both the communities. A frequent change in local administrators and lack of perceived priority for health and NCDs limited their involvement. Pre-existing engagement of community-based organizations and volunteers in health activities facilitated its implementation. The reach of the programme among the population was modest (25–32%). Health system interventions resulted in increased diagnosis and better management of NCDs at health facilities. Early outcome measures showed mixed results of change in different risk factors. The experiences gained are being used in both countries to expand and provide technical support to national efforts. This paper adds to the knowledge base on the feasibility of designing and

Abstract

OBJECTIVE: Paternal smoking is highly prevalent in Asia, and tobacco may account for a large proportion of household expenditures among poor families. We sought to characterise the relationship between paternal smoking, child malnutrition and food expenditures.

DESIGN: Data on smoking, household expenditures and child malnutrition were examined in a stratified multistage cluster sample of households in the Indonesia nutrition surveillance system. Main outcome measures were child wasting (weight-for-height Z-score < -2), underweight (weight-for-age Z-score < -2) and stunting (height-for-age Z-score < -2), and severe wasting, underweight and stunting (defined by respective Z-scores < -3).

SETTING: In total, 175,583 households from urban slum areas in Indonesia. SUBJECTS: Children 0-59 months of age.

RESULTS: The prevalence of paternal smoking was 73.8%. After adjusting for child gender and age, maternal age and education, and weekly per capita household expenditures, paternal smoking was associated with child stunting (odds ratio (OR) = 1.11, 95% confidence interval (CI) 1.08-1.14, P < 0.0001), severe wasting (OR = 1.17, 95% CI 1.03-1.33, P = 0.018) and severe stunting (OR = 1.09, 95% CI 1.04-1.15, P < 0.001). In households where the father was a smoker, tobacco accounted for 22% of weekly per capita household expenditures, with less money spent on food compared with households in which the father was a non-smoker.

CONCLUSIONS: Among poor families in urban slum areas of Indonesia, paternal smoking diverts household money from food to tobacco and exacerbates child malnutrition.

PMID: 17212837 [PubMed - indexed for MEDLINE]

1.7. Women


Abstract

BACKGROUND: Worldwide, use of tobacco is viewed as an important threat to the health of pregnant women and their children. However, the extent of tobacco use in pregnant women in low-income and middle-income countries (LMICs) remains unclear. We assessed the magnitude of tobacco use in pregnant women in LMICs(including Indonesia).

METHODS: We used data from Demographic and Health Surveys (DHS) done in 54 LMICs between Jan 1, 2001, and Dec 1, 2012, comprising 58,922 pregnant women (aged 15-49 years), which were grouped by WHO region. Prevalence of current tobacco use (smoked and smokeless) was estimated for every country. Pooled estimates by regions and overall were obtained from random-effects meta-analysis.

FINDINGS: Pooled prevalence of any tobacco use in pregnant women in LMICs was 2.6% (95% CI 1.8-3.6); the lowest prevalence was in the African region (2.0%, 1.2-2.9) and the highest was in the Southeast Asian region (5.1%, 1.3-10.9). The pooled prevalence of current tobacco smoking in pregnant women ranged from 0.6% (0.3-0.8) in the African region to 0.5% (1.5-12.1) in the Western Pacific region. The pooled prevalence of current smokeless tobacco use in pregnant women was lowest in the European region (0.1%, 0.0-0.3) and highest in the Southeast Asian region (2.6%, 0.0-7.6).
INTERPRETATION: Overall, tobacco use in pregnant women in LMICs was low; however high prevalence estimates were noted in some LMICs. Prevention and management of tobacco use and exposure to second-hand smoke in pregnancy is crucial to protect maternal and child health in LMICs.

Comment in


PMID: 25304418 [PubMed - indexed for MEDLINE]


Summary

This "Brief Profile on Gender and Tobacco in South-East Asia Region" emphasizes the need for a gender-specific approach to tobacco control. It urges Member States to take measures to address gender-specific issues when developing tobacco control strategies. It also describes the situation, challenges and opportunities related to gender and tobacco use in the Region.


Abstract

Tobacco use is a leading cause of death and of poor pregnancy outcome in many countries. While tobacco use is decreasing in many high-income countries, it is increasing in many low- and middle-income countries (LMICs), where by the year 2030, 80% of deaths caused by tobacco use are expected to occur. In many LMICs, few women smoke tobacco, but strong evidence indicates this is changing; increased tobacco smoking by pregnant women will worsen pregnancy outcomes, especially in resource-poor settings, and threatens to undermine or reverse hard-won gains in maternal and child health. To date, little research has focused on preventing pregnant women's tobacco use and secondhand smoke (SHS) exposure in LMICs(including Indonesia). Research on social and cultural influences on pregnant women's tobacco use will greatly facilitate the design and implementation of effective prevention programs and policies, including the adaptation of successful strategies used in high-income countries. This paper describes pregnant women's tobacco use and SHS exposure and the social and cultural influences on pregnant women's tobacco exposure; it also presents a research agenda put forward by an international workgroup convened to make recommendations in this area.

PMID:20225988[PubMed - indexed for MEDLINE]


Abstract

Little research has focused on women's exposure to secondhand smoke (SHS) in LMICs, local perceptions of SHS risk to women and children, and women's attempts to limit exposure to tobacco smoke in their households. This paper describes a community based survey in Indonesia that investigated these issues as one step in a movement to initiate community wide household smoking bans. The survey found high levels of exposure to SHS, high levels of awareness among both women and men that SHS placed women and children at risk for illness, a very low percentage of households having indoor smoking rules, great interest on the part of women to participate in a communitywide ban, and a promising level of male smoker agreement to comply with such a ban.
Women expressed a low sense of self efficacy in individually getting their husbands to quit smoking in their homes, but a strong sense of collective efficacy that husbands might agree to a well-publicized and agreed-upon community household smoking ban. Men and women expressed concern about the social risk of asking guests not to smoke in their homes without a communitywide ban and visible displays communicating their participation in this movement. The smoke free initiative described requires the participation of doctors in community education programs, and is attempting to introduce household smoking bans as a way of turning tobacco control into a family health and not just a smokers' health issue.

PMID:20367433 [PubMed - indexed for MEDLINE]

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**Kin F. Smoking among girls and young women in Asean Countries: A Regional Summary.** South East Asian Tobacco Control Alliance (SEATCA). 2009

**Summary**

Seven of the ten ASEAN countries – Cambodia, Indonesia, Laos PDR, Malaysia, Philippines, Thailand and Vietnam – participated in a regional study on smoking among girls and young women between the ages of 13 to 25 years old in 2007-2008. The study had 3 major objectives: 1) To determine the extent of cigarette smoking among girls and young women and socio-cultural factors associated with it; 2) To determine respondents’ exposure to tobacco advertising, promotion and sponsorship; and 3) To examine the respondents’ awareness of support for tobacco control policies such as smoke-free public places, bans on advertising, promotion and sponsorship and health warnings on cigarette packs.

Hadi SM, Yuanita A, Anggraeni L, Agnes NA, Elva Yesi Sp, SSos AHR. **Smoking in girls and young women in Indonesia.** South East Asian Tobacco Control Alliance (SEATCA). 2008

**Abstract**

**BACKGROUND:** A study of young women in Indonesia on tobacco indicates that 24.3% girls in the urban and 16.5% girls in the rural areas have ever smoked a cigarette. Most respondents either living in the urban or the rural areas were excessively exposed to tobacco/cigarette advertisements through various media, especially television and posters. The girls’ awareness on tobacco control policy and regulation is very low. Urban respondents are much more likely to have knowledge on tobacco control policy compared to rural respondents.

Perception about the impact of health warnings (text or pictorial) in cigarette pack is uncertain. Although they seemed to know about the risks of smoking through the health warning, it would not necessarily influence their intention to smoke. Apart from their view about its effectiveness, the majority of respondents said that the government should implement pictorial health warnings on cigarette packs. These polarized perceptions point to the challenges faced by policymakers who attempt to implement tobacco control policies.

**OBJECTIVE:** To examine the smoking behavior of girls and young women, their awareness of and support for tobacco control policies as well as their exposure to and perception of tobacco advertising, promotion, sponsorship and tobacco industry’s youth smoking prevention program and corporate social responsibility activities.

**DESIGN:**
A cross-sectional survey of secondary school girls and female college/university students was conducted from October 2007 to March 2008.

**PARTICIPANTS:** 3,040 respondents completed the survey form and 174 girls participated in FGDs.

1.8. **General population**


**Abstract**

**BACKGROUND:** Indonesia is one of the largest consumers of tobacco in the world, however there has been little work done on the economics addiction of tobacco. This study provides an empirical test of a rational addiction (henceforth RA) hypothesis of cigarette demand in Indonesia.
METHODS: Four estimators (OLS, 2SLS, GMM, and System-GMM) were explored to test the RA hypothesis. The author adopted several diagnostics tests to select the best estimator to overcome econometric problems faced in presence of the past and future cigarette consumption (suspected endogenous variables). A short-run and long-run price elasticities of cigarettes demand was then calculated. The model was applied to individuals pooled data derived from three-waves a panel of the Indonesian Family Life Survey spanning the period 1993-2000.

RESULTS: The past cigarette consumption coefficients turned out to be a positive with a p-value < 1%, implying that cigarettes indeed an addictive goods. The rational addiction hypothesis was rejected in favour of myopic ones. The short-run cigarette price elasticity for male and female was estimated to be -0.38 and -0.57, respectively, and the long-run one was -0.4 and -3.85, respectively.

CONCLUSIONS: Health policymakers should redesign current public health campaign against cigarette smoking in the country. Given the demand for cigarettes to be more prices sensitive for the long run (and female) than the short run (and male), an increase in the price of cigarettes could lead to a significant fall in cigarette consumption in the long run rather than as a constant source of government revenue.

PMID: 21345229 [PubMed] PMCID: PMC3050689


Abstract

Indonesia is one of the top five tobacco-consuming countries in the world (Ng et al. 2006). Most Indonesians consider cigarette-smoking socially acceptable (Aditama 2002). This study seeks to determine the extent to which the three theoretical debates identified by Pampel and Rogers (2004) are applicable in Indonesia. The empirical work of this study will be based on the 2000 Indonesian Family and Life Survey (2000 IFLS). The main conclusion from the regression analyses is that the effect of smoking on health is similar across all the socio-economic characteristics at the individual, household and community levels. Overall, multivariate analyses suggest that an additive relationship between socio-economic status and health, and the health impact of smoking in Indonesia, reflect neither the forces of the Blaxter nor social vulnerability hypotheses. The analyses of 2000 IFLS also suggest that marriage has beneficial effects on health and smoking-related morbidity.


Abstract

A population-based surveys were carried out in two demographic surveillance sites (DSSs) in Vietnam and Indonesia using the WHO STEPS approach to surveillance of non-communicable disease risk factors in order to characterize smoking epidemics in rural communities of Vietnam and Indonesia by identifying associations between socio-economic status and changes in smoking status among adult populations.

The paper reveals that the prevalence of smoking among people aged 25-64 years was higher in Indonesia than in Vietnam. Indonesian men started smoking regularly earlier and ceased less than Vietnamese men. While low income was found to be a significant predictor of becoming regular smokers in Vietnam, old birth cohort and low education significantly increased the probability of being a regular smoker in Indonesia. Economic status was also found to be a significant predictor of smoking cessation in Vietnam while education and occupation played an important role in Indonesia.

Abstract
Smoking is an important public health problem in Indonesia. Up to 60% of male adult population as well as about 4% of female adult population are smokers. In fact, some of Indonesian kretek cigarettes have quite high tar and nicotine content. Besides health effect, smoking habit also influence economic status of the individuals as well as the family. In heath point of view, even though reliable nationwide morbidity and mortality data are scarce, report from various cities showed smoking related diseases, such as Lung cancer, COPD, effect of pregnancy, etc. Other problem is a fact that smoking habit start quite in early age in Indonesia. This article also describe factors complicate smoking control program as well as several things to be done to strengthen smoking control program in Indonesia.

2. Tobacco related Mortality & Morbidity


Abstract
We examined the relationship between paternal smoking and child mortality. Among 361021 rural and urban families in Indonesia, paternal smoking was associated with increased infant mortality (rural, odds ratio [OR]=1.30; 95% confidence interval [CI]=1.24, 1.35; urban, OR=1.10; 95% CI=1.01, 1.20), and under-5 child mortality (rural, OR=1.32; 95% CI=1.26, 1.37; urban, OR=1.14; 95% CI=1.05, 1.23). Paternal smoking diverts money from basic necessities to cigarettes and adversely affects child health; tobacco control should therefore be considered among strategies to improve child survival.

PMID: 18309124 [PubMed - indexed for MEDLINE] PMCID: PMC2636455


Abstract
Indonesian clove cigarettes (kreteks), typically have the appearance of a conventional domestic cigarette. The unique aspects of kreteks are that in addition to tobacco they contain dried clove buds (15-40%, by wt.), and are flavored with a proprietary "sauce". Whereas the clove buds contribute to generating high levels of eugenol in the smoke, the "sauce" may also contribute other potentially harmful constituents in addition to those associated with tobacco use. We measured levels of eugenol, trans-anethole (anethole), and coumarin in smoke from 33 brands of clove-flavored cigarettes (filtered and unfiltered) from five kretek manufacturers. In order to provide information for evaluating the delivery of these compounds under standard smoking conditions, a quantification method was developed for their measurement in mainstream cigarette smoke. The method allowed collection of mainstream cigarette smoke particulate matter on a Cambridge filter pad, extraction with methanol, sampling by automated headspace solid-phase microextraction, and subsequent analysis using gas chromatography/mass spectrometry. The presence of these compounds was confirmed in the smoke of kreteks using mass spectral library matching, high-resolution mass spectrometry (+/-0.0002 amu), and agreement with a relative retention time index, and native standards. We found that when kreteks were smoked according to standardized machine smoke parameters as specified by the International Standards Organization, all 33 clove brands contained levels of eugenol ranging from 2,490 to 37,900 microg/cigarette (microg/cig). Anethole was detected in smoke from 13 brands at levels of 22.8-1,030 microg/cig, and coumarin was detected in 19 brands at levels ranging from 9.2 to 215 microg/cig. These detected levels are significantly higher than the levels found in commercial cigarette brands available in the United States.

PMID: 17583404 [PubMed - indexed for MEDLINE]


Abstract
OBJECTIVE: To gain a better understanding of the health transition in Indonesia, we sought to describe the prevalence and distribution of risk factors for non-communicable diseases and to identify the risk-factor burden among a rural population and an urban population.
METHODS: Using the protocol of the WHO STEPwise approach to Surveillance (STEPS), risk factors for non-communicable diseases were determined for 1502 men and 1461 women aged 15-74 years at the Purworejo Demographic Surveillance Site in 2001.

FINDINGS: Smoking prevalence was high among men (913/1539; weighted percentage=53.9.%) in both rural and urban populations; it was almost non-existent among women. A higher proportion of the urban population and the richest quintile of the rural population had high blood pressure and were classified as being overweight or obese when compared with the poorest quintile of the rural population. Those classified as being in the richest quintile who lived in the rural area were 1.5 times more likely to have raised blood pressure and 8 times more likely to be overweight than those classified as being in the poorest quintile and living in the rural area. Clustering of risk factors was higher among those classified as being in the richest quintile of those living in the rural area compared with those classified as being in the poorest quintile; and the risks of clustering were just 20-30% lower compared with the urban population.

CONCLUSION: Both the rural and urban populations in Purworejo face an unequally distributed burden of risk factors for non-communicable diseases. The burden among the most well-off group in the rural area has already reached a level similar to that found in the urban area. The implementation of the WHO STEPS approach was feasible, and it provides a comprehensive picture of the burden of risk factors, allowing appropriate health interventions to be implemented to address health inequities.

PMID:16628304 [PubMed - indexed for MEDLINE] PMCID: PMC2627311


Abstract

Chronic obstructive pulmonary disease (COPD) is a leading cause of morbidity and mortality worldwide. The World Health Organization (WHO) estimated that COPD is currently the seventh leading cause of death and disability worldwide, but will rise to the fifth position by 2020. The estimated prevalence of COPD worldwide in 2001 was 1013/100,000 population; it was highest in the Western Pacific Region and lowest in Africa. The mortality from COPD followed the same pattern. The prevalence of smoking is slowly decreasing in the industrialised world and rising in developing countries, especially Asia (including Indonesia) and Africa. Cigarette consumption per adult has also decreased in the Americas, remained the same in Europe but increased in all other regions, especially the Western Pacific. Indoor air pollution from combustion of biomass/traditional fuels and coal, previous tuberculous infection, outdoor air pollution and childhood respiratory infections are other important risk factors for COPD in developing countries. The rise in morbidity and mortality from COPD will be most dramatic in Asian and African countries over the next two decades, mostly due to progressive increase in the prevalence of smoking. As developing countries can ill afford the added economic burden of COPD and other smoking-related diseases, there is an urgent need for multi-dimensional actions in reducing the main risk factor of cigarette smoking.

Comment in

- Management of chronic obstructive pulmonary disease in Asia and Africa. [Int J Tuberc Lung Dis. 2004]

PMID: 14974740 [PubMed - indexed for MEDLINE]

2.1. Cancers related to tobacco use

K. Michael Cummings. Global tobacco control: Preventing 10 million cancer deaths by 2030 Cancer Prev Res 2010; 3(1 Suppl):ED05-03..

Abstract

Tobacco use is responsible for one in three cancer-related deaths. Thanks to 50 years of aggressive public education efforts, tobacco use is declining in most industrialized countries. However, worldwide, tobacco consumption is actually increasing, driven in part by population growth and economic development in China, India, Indonesia, and parts of Africa and the Middle East. There are now approximately 1.3 billion smokers in the world, and 84% of them reside in the developing world. Tobacco use is the world's leading cause of preventable death, directly causing 30% of the 11.5 million annual cancer predicted by 2030 deaths. In recognition of this enormous threat, the member countries of the WHO adopted the Framework Convention on Tobacco Control [FCTC], the first international treaty devoted to health. The FCTC has been ratified by over 160 countries, but some large countries such as the United States and Russia have yet to ratify the treaty. Ratification obligates
countries to implement a comprehensive set of common sense policies intended to reduce the demand for tobacco use. These policies include measures to: keep the price of tobacco high; protect nonsmokers from exposure to tobacco smoke; regulate products; control packaging and labeling of tobacco products; ban tobacco product marketing; educate the public; promote and assist tobacco cessation and prevention; prevent sales to minors; and promote alternative uses for tobacco croplands. Estimates indicate that aggressive implementation of FCTC policies could prevent 10 million excess cancer deaths anticipated over the next 20 years. The policies included in the FCTC were selected on the basis of scientific evidence. However, as the FCTC continues with its critical implementation phase in the next 5 years, and as nations that have ratified the treaty decide what specific policies will be implemented to meet their treaty obligations, it will become increasingly important that scientific evidence continue to guide the adoption of policies that will work effectively. There is already evidence that the tobacco industry is working to undermine the FCTC by encouraging countries to adopt policies that, although compliant with the FCTC, are suboptimal. As in clinical medicine, good public health practice demands that rigorously evaluated evidence guide the adoption of new tobacco control interventions. Thus, in the next few years, amassing a strong body of evidence from a methodologically sound evaluation of FCTC policies will be critical. This can then be used to guide governmental policymakers in the future.

2.1.1. Head and Neck Cancers


Abstract

BACKGROUND: Tobacco use is a well-established risk factor for cancers of the lung, head and neck, nasopharynx, esophagus, stomach, pancreas, liver, kidney, bladder, leukemia, and cervix. Alcohol consumption is a well-established risk factor for cancers of the head and neck, esophagus, liver, colorectum, and breast for women only. The majority of studies on tobacco and alcohol were conducted in high-income countries (HICs).

OBJECTIVE: The aim of this review was to assess the extent of tobacco and alcohol usage and to compare the cancer burden between low- and high-income regions.

FINDINGS: Overall, tobacco smoking is estimated to account for 21% of cancer deaths worldwide (29% in HICs and 18% in low- and middle-income countries [LMICs]). Alcohol consumption is estimated to account for 5% of all cancer deaths worldwide, with similar proportions in LMICs. Cancers of the breast, lung, stomach, liver, head and neck, esophagus, cervix, and nasopharynx, and leukemia are already diagnosed in greater numbers each year in less-developed countries compared with more developed countries. The future burden of tobacco- and alcohol-related cancers on less-developed regions is expected to increase greatly based on demographic effects, with a 69.9% increase in tobacco-related cancer cases and a 68% increase in cancers related to alcohol. Although HICs have experienced a decrease in tobacco prevalence in recent decades, LMICs (Indonesia mentioned) are still in the early stages of the tobacco epidemic.

CONCLUSION: Tobacco use and alcohol consumption will clearly remain important risk factors that must be targeted with public health efforts particularly in LMICs.


Abstract

PURPOSE: This study aimed to determine the association between tobacco consumption (kretek) and betel quid chewing with oral cancer risk.

MATERIALS AND METHODS: A total of 81 cases of oral cancers were matched with 162 controls in this hospital-based study. Information on sociodemographic characteristics and details of risk habits (duration, frequency and type of tobacco consumption and betel quid chewing) were collected. Association between smoking and betel quid chewing with oral cancer were analysed using conditional logistic regression.

RESULTS: Slightly more than half of the cases (55.6%) were smokers where 88.9% of them smoked kretek. After adjusting for confounders, smokers have two fold increased risk, while the risk for kretek consumers and those smoking for more than 10 years was increased to almost three-fold. Prevalence of betel quid chewing...
Indonesia

An annotated bibliography of scientific studies done on tobacco topic in WHO South-East Asia Region countries

among cases and controls was low (7.4% and 1.9% respectively). Chewing of at least one quid per day, and quid combination of betel leaf, areca nut, lime and tobacco conferred a 5-6 fold increased risk.

CONCLUSIONS: Smoking is positively associated with oral cancer risk. A similar direct association was also seen among betel quid chewers.

PMID: 25374188 [PubMed - in process]


Abstract

BACKGROUND: Despite gradual understanding of the multidimensional health consequences of betel-quid chewing, information on the effects of dependent use is scant.

AIMS: To investigate the 12-month prevalence patterns of betel-quid dependence in six Asian populations and the impact of this dependence on oral potentially malignant disorders (OPMD).

METHOD: A multistage random sample of 8922 participants was recruited from Taiwan, mainland China, Indonesia, Malaysia, Sri Lanka and Nepal. Participants were evaluated for betel-quid dependency using DSM-IV and ICD-10 criteria and assessed clinically for oral mucosal lesions.

RESULTS: The 12-month prevalence of dependence was 2.8-39.2% across the six Asian samples, and 20.9-99.6% of those who chewed betel-quid were betel-quid dependent. Men dominated the prevalence among the east Asian samples and women dominated the prevalence in south-east Asian samples. 'Time spent chewing' and 'craving' were the central dependence domains endorsed by the Chinese and southern/south-east Asian samples respectively, whereas the Nepalese samples endorsed 'tolerance' and 'withdrawal'. Dependency was linked to age, gender, schooling years, drinking, smoking, tobacco-added betel-quid use and environmental accessibility of betel-quid. Compared with non-users, those with betel-quid dependency had higher pre-neoplastic risks (adjusted odds ratios 8.0-51.3) than people with non-dependent betel-quid use (adjusted odds ratio 4.5-5.9) in the six Asian populations.

CONCLUSIONS: By elucidating differences in domain-level symptoms of betel-quid dependency and individual and environmental factors, this study draws attention to the population-level psychiatric problems of betel-quid chewing that undermine health consequences for OPMD in six Asian communities.

PMID: 22995631 [PubMed - indexed for MEDLINE]


Abstract

Health risks stemming from betel-quid (BQ) chewing are frequently overlooked by people. Updated epidemiological data on the increased BQ use among Asian populations using comparable data collection methods have not been widely available. To investigate the prevalence, patterns of practice and associated types of oral preneoplastic disorders, an intercountry Asian Betel-quid Consortium study (the ABC study) was conducted for Taiwan, Mainland China, Malaysia, Indonesia, Nepal and Sri Lanka. A random sample of 8,922 subjects was recruited, and the data were analyzed using survey-data modules adjusted for the complex survey design. Chewing rates among men (10.7-43.6%) were significantly higher than women (1.8-34.9%) in Taiwan, Mainland China, Nepal and Sri Lanka, while women's rates (29.5-46.8%) were higher than that for men (9.8-12.0%) in Malaysia and Indonesia. An emerging, higher proportion of new-users were identified for Hunan in Mainland China (11.1-24.7%), where Hunan chewers have the unique practice of using the dried husk of areca fruit rather than the solid nut universally used by others. Men in the Eastern and South Asian study communities were deemed likely to combine chewing with smoking and drinking (5.6-13.6%). Indonesian women who chewed BQ exhibited the highest prevalence of oral lichen planus, oral submucous fibrosis and oral leukoplakia (9.1-17.3%). Lower schooling, alcohol drinking and tobacco smoking were identified as being associated with BQ.
chewing. In conclusion, the ABC study reveals the significant cultural and demographic differences contributing to practice patterns of BQ usage and the great health risks that such practices pose in the Asian region.

PMID: 21128235 [PubMed - indexed for MEDLINE]

2.1.2. Thoracic cancers


Abstract

OBJECTIVE: Reliable cancer burden estimates are rarely available from most developing countries where cancer registration is lacking. This study provided estimates on the current and future number of lung cancer deaths in Indonesia, Vietnam and Ethiopia, and Sub-Saharan Africa at large.

METHODS: The number of lung cancer deaths was estimated from detailed smoking prevalence data (obtained from surveys among 8,726 rural individuals aged 25-74 years in Indonesia, Vietnam, and Ethiopia in 2005-2006) and on lung cancer rate estimates among non-smokers.

RESULTS: Our estimate for lung cancer deaths in Sub-Saharan Africa is 44,076 in 2005, which is 2.6 times the most recent WHO estimate in 2003 (17,000 deaths). A similar ratio is found for the country-specific estimate in Ethiopia. Our estimates are only slightly higher than the WHO's in Indonesia, and Vietnam. The attributable risk of smoking for lung cancer death among men was 39% in Ethiopia, 80% in Indonesia and 85% in Vietnam. We expect the annual number of lung cancer deaths to double by 2025, even if the smoking prevalence is assumed not to increase further.

CONCLUSIONS: WHO estimates on lung cancer deaths in Asia appear to be slightly lower than our study results; however, in Africa, the burden appears to be largely underestimated.

PMID:19123056[PubMed - indexed for MEDLINE]

2.1.3. Abdominal cancers


Abstract

The gastric cancer incidence in Semarang, Indonesia, is exceedingly low: only approximately 1/100th of the level in Japan. To elucidate the reason, we carried out an ecological study recruiting 69 male and 102 female participants from the general populace in January 2005. Positive urea breath tests were 0% for both men and women, and Helicobacter pylori (H. pylori) IgG antibodies were found in 2% (0-5, 95% confidence interval) of men and 2% (0-4) of women, significantly lower than the 62% (58-65) and 57% (53-60), respectively, in Japan. Furthermore, there were no positive findings with the pepsinogen tests in Semarang, again significant in comparison with the 23% (22-25) and 22% (20-23) in Japan. Variation in smoking levels and consumption of NaCl, vegetables and fruit were found, but not to an extent that would allow explanation of the major differences in gastric cancer incidence. We may conclude that the very low prevalence of H. pylori infection and thus chronic atrophic gastritis account for the rarity of stomach cancer in Semarang, Indonesia.

PMID: 16367906 [PubMed - indexed for MEDLINE]

2.1.4. Other cancers


Abstract

Breast Cancer (BC) still interest to be discussed, comparison studies from several investigators still in controversial, especially on risk factors of BC, otherwise BC morbidity and mortality were stationary, exact, had a
Annotated bibliography of scientific studies done on tobacco topic in WHO South-East Asia Region countries

2.2. Non-cancerous diseases

2.2.1. Tuberculosis


Abstract


OBJECTIVE: To document smoking patterns among tuberculosis (TB) patients before diagnosis and following treatment, to identify smoking-related messages given by health professionals and DOTS providers and to identify predictors of smoking relapse.

DESIGN: A cross-sectional survey of 239 male TB patients completed DOTS-based treatment during 2005-2006. Subjects were interviewed at home using a semi-structured questionnaire. Female patients were excluded, as very few smoke.

RESULTS: Most TB patients quit smoking when under treatment, but over one third relapsed at 6 months post-treatment. About 30% were never asked about their smoking behavior or advised about quitting. Of relapsed smokers, 60% received only general health messages and not TB-specific smoking messages. DOTS providers are not currently involved in cessation activities. The perception that any level of smoking is harmless for ex-TB patients was a significant predictor for smoking relapse.

CONCLUSION: Physicians and DOTS providers should be actively involved in smoking cessation activities among TB and ex-TB patients. Based on these data, the Quit Tobacco Indonesia Project is mounting a pilot intervention to train DOTS providers, who are mostly family members of patients, to deliver smoking cessation messages and reinforce the cessation advice provided by physicians during and following TB treatment.

PMID:18419894[PubMed - indexed for MEDLINE]

2.2.2. Cardiovascular diseases


Abstract

BACKGROUND: Non-communicable Disease (NCD) is increasingly burdening developing countries including Indonesia. However only a few intervention studies on NCD control in developing countries are reported. This study aims to report experiences from the development of a community-based pilot intervention to prevent Cardiovascular disease (CVD), as initial part of a future extended PRORIVA program (Program to Reduce Cardiovascular Disease Risk Factors in Yogyakarta, Indonesia) in an urban area within Jogjakarta, Indonesia.

METHODS: The study is quasi-experimental and based on a mixed design involving both quantitative and qualitative methods. Four communities were selected as intervention areas and one community was selected as a referent area. A community-empowerment approach was utilized to motivate community to develop health
promotion activities. Data on knowledge and attitudes with regard to CVD risk factors, smoking, physical inactivity, and fruit and vegetable were collected using the WHO STEPwise questionnaire. 980 people in the intervention areas and 151 people in the referent area participated in the pre-test. In the post-test 883 respondents were re-measured from the intervention areas and 144 respondents from the referent area. The qualitative data were collected using written meeting records (80), facilitator reports (5), free-listing (112) and in-depth interviews (4). Those data were analysed to contribute a deeper understanding of how the population perceived the intervention.

RESULTS: Frequency and participation rates of activities were higher in the low socioeconomic status (SES) communities than in the high SES communities (40 and 13 activities respectively). The proportion of having high knowledge increased significantly from 56% to 70% among men in the intervention communities. The qualitative study shows that respondents thought PRORIVA improved their awareness of CVD and encouraged them to experiment healthier behaviours. PRORIVA was perceived as a useful program and was expected for the continuation. Citizens of low SES communities thought PRORIVA was a "cheerful" program.

CONCLUSION: A community-empowerment approach can encourage community participation which in turn may improve the citizen's knowledge of the danger impact of CVD. Thus, a bottom-up approach may improve citizens' acceptance of a program, and be a feasible way to prevent and control CVD in urban communities within a low income country.

2.2.3. Diabetes


Abstract

AIM: To find the prevalence and prediction factors of undiagnosed diabetes mellitus in an Indonesian adult population. By recognizing the prediction factors, we can make epidemiological modeling and scoring system of undiagnosed diabetes mellitus in Indonesia which can be used as a screening tool in primary health care and health care with minimal diagnostic facility.

METHODS: Cross-sectional design was conducted on subjects from National Health Survey, Ministry of Health Republic of Indonesia 2007. Research population was upper than 18th years old. Diabetes mellitus was diagnosed by oral glucose tolerance test based on WHO 1999 standard which has been adapted by Indonesian Society for Endocrinologist. Subjects were categorized undiagnosed if they were newly diagnosed from the survey.

RESULTS: From 24417 subjects who undergo oral glucose tolerance test, we choose 20249 subjects who have complete data on important variables. After eliminating subjects bellow 18 years old, we have 18956 subjects included in the study. Prevalence of undiagnosed diabetes mellitus is 4.1% from total 5.6% of diabetic population in Indonesia. Subjects are included in the analysis is undiagnosed diabetes mellitus subjects (778 subjects) and subjects with normal blood glucose or non-diabetes (16011 subjects). From bivariate analysis, variables age, sex, social economic status, education level, obesity, central obesity, hypertension, physical inactivity, and smoking habit have significant association with undiagnosed diabetes mellitus (p < 0.05). From multivariate analysis, we found prediction factors of undiagnosed diabetes mellitus are age, obesity, central obesity, hypertension, and smoking habit.

CONCLUSION: Prevalence of undiagnosed diabetes mellitus is 4.1%. Prediction factors of undiagnosed diabetes mellitus in Indonesia are age, obesity, central obesity, hypertension, and smoking habit.

PMID:21063043[PubMed - indexed for MEDLINE]


Abstract

OBJECTIVES: To assess the feasibility of delivering brief and disease-centred smoking cessation interventions to patients with diabetes mellitus in clinical settings.
METHODS: We conducted a feasibility study involving two interactive smoking cessation interventions: doctor's advice and visual representation of how tobacco affects diabetes (DA) and DA plus direct referral to a cessation clinic (CC). Follow-up was at 3 and 6 months post intervention. Primary outcome was 7-day-point prevalence abstinence. The study involved male patients recruited from two referral diabetes clinics in Yogyakarta Province, Indonesia during January 2008 to May 2009. Of the 71 patients who smoked during the last month, 33 were randomized to the DA group and 38 to the CC group.

RESULTS: At 6 months follow-up, DA and CC groups had abstinence rates of 30% and 37%, respectively. Of those continuing to smoke, most reported an attempt to quit or reduce smoking (70% in DA and 88% in CC groups). Patients in both groups had increased understanding of smoking-related harm and increased motivation to quit smoking.

CONCLUSIONS: This study demonstrates the feasibility of disease-centred doctors' messages about smoking cessation for patients with diabetes, supported by the presence of a CC motivating clinicians to routinely give patients cessation messages.

PMID:20444767[PubMed - indexed for MEDLINE]


Abstract

AIM: To estimate the prevalence of diagnosed and undiagnosed diabetes mellitus (DM) and impaired glucose tolerance (IGT) in 15 year old and over in urban Indonesia and their association with risk factors such as age, smoking, physical inactivity, obesity, hypertension.

METHODS: A national sample involving 24,417 participants living in urban Indonesia aged > 15 years were examined for 2 hours of plasma glucose concentrations in a cross sectional survey using the 75-g oral glucose. Diagnostic criteria of the World Health Organization 1999 and American Diabetes Association (ADA) 2003 were used to determine the prevalence of abnormal glucose tolerance. Data on age, smoking, physical activity were obtained from the personal interview, and obesity included body mass index and waist circumference and blood pressure were measured.

RESULTS: The prevalences of diabetes in urban Indonesia was 5.7%, consisting of diagnosed diabetes mellitus (DDM) 1.5%, undiagnosed diabetes mellitus (UDDM) 4.2% and IGT 10.2%. The prevalence of DM was 6.4% in women and 4.9% in men. In the youngest group (15-24 years) 5.3% had IGT. Prevalence increases with age with a sharp rise from middle age (35-54 years). Determinant factors for IGT and diabetes were age, smoking, obesity, central obesity and hypertension.

CONCLUSION: these results indicate that diabetes has become a major public health problem in Indonesia and needs national strategies to screen, prevent and treat the disease.

PMID:20124611[PubMed - indexed for MEDLINE]


Abstract

OBJECTIVES: To document the prevalence of tobacco use among male diabetes patients in a clinic based population of Yogyakarta Province, Indonesia; to examine patient's perceptions of smoking as a risk factor for diabetes complications; and to investigate whether patients had received cessation messages from their doctors.


RESULTS: 65% of male diabetes patients smoked before being diagnosed, and 32% smoked in the last 30 days. Most patients incorrectly perceived low level smoking safe for diabetics (mean of 3.6 cigarettes). The median
range of cigarettes smoked per day was in excess of this ‘safe’ amount (4-10 cigarettes). Most respondents did not associate smoking with diabetes and its complications. Only 35% of all patients recalled being asked whether they smoked by their doctors, and there were no differences between smokers and non-smokers. Quit messages received by patients were seen as general health advice and not diabetes specific.

**CONCLUSIONS:** Many diabetic patients continue to smoke despite the hazard of smoking on diabetes complications and mortality. Smoking cessation is not commonly encouraged by health-care providers in Indonesia, and is not a routine part of diabetes counselling despite the risk of smoking to those with diabetes. Project Quit Tobacco International is currently developing cessation services for patients with diabetes and encouraging medical and nursing schools to incorporate disease specific tobacco education in its curriculum and skill based classes in tobacco cessation counselling.

PMID: 19228351 [PubMed - indexed for MEDLINE]

2.2.4. Respiratory


Abstract

This study uses raw data covering over 17,000 people from the 2001 National Socio-Economic Survey (NSES) and 2001 National Household Health Survey (NHHS), including 3621 children under 10 years of age, to investigate the relationship between respiratory diseases and exposure to secondhand cigarette smoke through living in a home where people smoke. An important finding is that children under 10 years of age who live in homes where 30 or more cigarettes are smoked each day are significantly more likely to have various respiratory diseases than children who live in smoke-free homes.

2.2.5. Other diseases


Abstract

**BACKGROUND:** Parental smoking during pregnancy is associated with lower birth weight and gestational age, as well as with the risks of low birth weight (LBW) and preterm birth. The present study aims to assess the association of parental smoking during pregnancy with birth outcomes in urban and rural areas.

**METHODS:** This was a secondary analysis of data collected in the Indonesia Family Life Survey, between 1993 and 2007, the first national prospective longitudinal cohort study in Indonesia. Retrospective data of parental smoking habits, socioeconomic status, pregnancy history and birth outcomes were collected from parents with children aged 0 to 5 years (n=8?3789). We assessed the relationships between the amount of parental smoking during pregnancy with birth weight (LBW) and with gestational age (preterm birth).

**RESULTS:** We found a significant reduction in birth weight to be associated with maternal smoking. Smoking (except for paternal smoking) was associated with a decrease in the gestational age and an increased risk of preterm birth. Different associations were found in urban area, infants born to smoking fathers and both smoking parents (>20 cigarettes/day for both cases) had a significant reduction in birth weight and gestational age as well as an increased risk of LBW and preterm birth.

**CONCLUSIONS:** Residence was found to be an effect modifier of the relation between parental smoking during pregnancy, amount of parental smoking, and birth outcomes on their children. Smoking cessation/reduction and smoking intervention program should be advised and prioritized to the area that is more prone to the adverse birth outcomes.

PMID: 25551278 [PubMed - as supplied by publisher] PMCID: PMC4302514
3. **Tobacco control interventions (including policies, legislations and taxation)**


**Abstract**

Tobacco is a major causative agent for various deadly diseases such as coronary artery disease and cancers. It is the largest avoidable health risk in the world, causing more problems than alcohol, drugs, high blood pressure, excess weight or high cholesterol. As countries, like Indonesia, prepare to develop national policy guidelines for the tobacco reduction, the scientific community can help by providing a continuous ideas and forum for sharing and distributing information, writing up guidelines, reviewing best practices, raising funds and establishing partnerships. We propose several strategies such as advertisement interference, cigarette pricing policy, adolescent smoking prevention policy, support for smoking cessation therapy, special informed consent for smokers, smoking prohibition at public spaces, career incentives, economic incentives as well as advertisement incentives in reducing tobacco consumption. We hope that these strategies would help people give up their smoke habit, or help them from starting to smoke.

PMID: 25518881 [PubMed - as supplied by publisher]

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**Abstract**

Tobacco consumption is a major causative agent for various deadly diseases such as coronary artery disease and cancer. It is the largest avoidable health risk in the world, causing more problems than alcohol, drug use, high blood pressure, excess body weight or high cholesterol. As countries like Indonesia prepare to develop national policy guidelines for tobacco harm reduction, the scientific community can help by providing continuous ideas and a forum for sharing and distributing information, drafting guidelines, reviewing best practices, raising funds, and establishing partnerships. We propose several strategies for reducing tobacco consumption, including advertisement interference, cigarette pricing policy, adolescent smoking prevention policy, support for smoking cessation therapy, special informed consent for smokers, smoking prohibition in public spaces, career incentives, economic incentives, and advertisement incentives. We hope that these strategies would assist people to avoid starting smoking or in smoking cessation.

PMID: 25518881 [PubMed]

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On 1 January 2014, Law No. 28 of 2009 on regional taxes was introduced, which allows local provinces in Indonesia to charge a local tax to cigarettes. The tariff is 10% of cigarette excise.

This tax collectively amounts to about USD 796 Million, a significant sum. Following successful international examples for funding tobacco control, a minimum of 50% of the funds raised from the tax are to be used for health promotion, in particular through public anti-smoking campaigns and enforcing smoke free public spaces. This means local governments have the authority to decide on strengthening tobacco control measures for their provinces and cities.

Unfortunately, five smokers challenged this cigarette tax policy in the Constitutional Court, calling for its abolition. Their argument was that the policy harms the constitutional rights of cigarette smokers as consumers by requiring them to pay both excise tax and local cigarette tax. They argued this amounts to double taxation, which is prohibited by the tax law and is unjust.

However public health won, and the suit was rejected by the Constitutional Court in May 19, 2014. In the judgment, the Court stated that in accordance with Law No. 11/1995 on Excise Tax, the subject of excise tax is manufacturers, distributors, and importers, while its object includes cigarettes, cigars, tobacco leaf and tobacco...
strips. In the provisions of Articles 26 and 27 of the Local Tax Law on the other hand, the object of local cigarette taxes is consumption of cigarettes and the subject of this tax is cigarette consumers. “Thus, there is a difference between the object and the subject of excise tax in comparison to the object and subject of local cigarette tax,” said one of the Constitutional Judges.

The Court ruled that the cigarette excise tax paid together with local cigarette tax is the “politics of taxation” to increase state revenues as well as provide compensation on the negative health impacts of smoking. According to the judge, “Simultaneous excise tax and local cigarette tax have positive impact on reducing cigarette consumption and improve society’s health.”

Several benefits will arise from the Court’s rejection of the suit and implementation of the tax. The first is that the local cigarette tax will increase cigarette prices, thereby making cigarettes less affordable, and in turn likely direct reducing smoking uptake among children. The second benefit is local governments will receive increased funds as revenue to go towards local development and increased living standards. A third benefit is the increased funding available to be used exclusively for health promotion and law enforcement. This includes anti-tobacco campaigns and strengthened enforcement of tobacco control regulations such as non smoking areas.

Together, these measures will change the scenario of tobacco control at the local level and enhance local government efforts to better protect children and the poor from the harms of tobacco. It represents a welcome step forward in a country that has been dubbed a paradise for tobacco companies due to lax regulation.


Abstract

OBJECTIVE: District policies were recently put into place in Indonesia prohibiting smoking in public spaces. This study sought to (1) assess participants’ general knowledge of secondhand smoke (SHS) dangers; (2) assess participants’ awareness of and specific knowledge of smoke-free (SF) policies; and (3) assess the extent to which such policies are socially enforced and gather examples of successful social enforcement.

METHODS: Qualitative in-depth interviews and focus group discussions were conducted in Bogor and Palembang cities with both community members and key informants such as government officials, non-government agency staff, religious leaders and health workers.

RESULTS: Participants in both Palembang and Bogor find SF policy important. Although there was awareness of SHS dangers and SF policies, accurate knowledge of the dangers and an in-depth understanding of the policies varied. There was a high level of support for the SF policies in both cities among both smokers and nonsmokers. Many participants did have experience asking a smoker not to smoke in an area where it was restricted, even if their comfort in doing so varied. There was, however, a higher level of comfort in telling smokers to stop or to move away from pregnant women and children. Hesitation to socially enforce the policies was especially present when asking men of status and/or community leaders to stop smoking, but overall participants felt they could comfortably ask someone to obey the law.

CONCLUSION: Palembang and Bogor may be evolving towards creating social norms in support of prohibiting smoking in public spaces. If provided with more support from government and law officials, such as government officials themselves promoting the policies and demonstrating compliance, and renewed efforts to promote and enforce policies in general were made, Indonesians in these cities may feel more confident protecting non-smokers from SHS.

PMID: 25244917 [PubMed - as supplied by publisher]
An annotated bibliography of scientific studies done on tobacco topic in WHO South-East Asia Region countries


The Government of Indonesia convened a high-level inter-ministerial meeting on the WHO Framework Convention on Tobacco Control (WHO FCTC) held in Jakarta, Indonesia, 1 April 2014. The meeting was called by Indonesia’s Coordinating Ministry of People’s Welfare, to discuss about Indonesia’s accession to the WHO FCTC. Chaired by the Minister of Health, Dr Nafsiah Mboi, Sp.A, MPH, the meeting was attended by representatives of ministries. Among the officials those of the Ministry of Agriculture, Ministry of Foreign Affairs, Ministry of Industry, Ministry of Labour and Transmigration, Ministry of Child and Women’s Protection, Ministry of Social Welfare, and Ministry of Youth and Sports were present.

The tobacco control treaty has been ratified by 178 Parties, representing 90% of global population. By providing concrete measures to reduce tobacco use the WHO FCTC protects populations from disability, disease and premature death caused by tobacco. Also, the WHO FCTC provides a frame of work and collaboration among Parties to prevent any interference of tobacco industry in the process of developing and implementing tobacco control policy.

Through a video message Dr Margaret Chan, the WHO Director-General asked the Ministers in the Indonesian government to support Indonesia’s accession to the WHO Framework Convention on Tobacco Control. “Countries implementing the WHO FCTC see almost immediate double-digit drops in the number of heart attacks, strokes, respiratory disorders and tobacco-related cancers. Also, none of the adverse economic effects like lost revenues or jobs predicted in their (tobacco industry) arguments has actually been documented in any of the large number of countries that parties to the WHO FCTC,” said Dr Chan.

Dr Poornam Kherpatap Singh, the WHO Regional Director for South East Asia Region shared messages to the attending high officials. “The WHO FCTC was developed to protect health, not restrict trade. Countries implementing it need not see a change in their trade portfolio.” This international health treaty is broadly compatible with other international obligations, including those related to trade. Countries with long history of tobacco culture like Brazil, India, and Turkey have ratified the WHO FCTC and seen the decrease of prevalence in related diseases.

Dr Douglas Bettcher, WHO Director of Prevention of Noncommunicable Diseases from Geneva and Professor Prakit Vathesatogkit from Thailand, one of the countries that has a ratified the Convention and saw its benefits, attended the meeting and provided information, data, facts related to the aspects of implementing the WHO FCTC and responded to the officials’ questions.

Dr Bettcher and Professor Prakit addressed some of the concerns in the room related to the tobacco industry in the country and showed how ratifying the WHO FCTC benefits country’s public health without an immediate dramatic impact on the tobacco industry. Eight of the ten largest producers of tobacco in the world are Parties to the WHO FCTC. The tobacco companies have a history of hyper-inflating the numbers of their employees and presenting overwhelming numbers suggesting a catastrophic scenario of job losses if tobacco control measures are taken. However, neither immediate impact on tobacco agriculture and jobs, nor a negative impact on the overall economy have been reported by any of these countries.

In the press conference, following the meeting, the Honourable Minister of Health read out from the letter directly sent by the Director-General of WHO, Dr Margaret Chan and the Executive Director of UNICEF, Mr Anthony Lake, to Honourable President of Indonesia Susilo Bambang Yudhoyono, appreciating his leadership in leading Post 2015 MDGs policies. One of them is to decrease the number of cases of noncommunicable diseases, which is largely caused by tobacco. One of the alternatives to increase the cases of noncommunicable diseases is to access WHO FCTC. The letter also mentioned supports to Indonesia in encountering the strong influence of tobacco industry. “Don’t be surprised, because that is what the tobacco industry has done in 177 countries that have ratified WHO FCTC”.


Abstract

BACKGROUND: While television advertisements (ads) that communicate the serious harms of smoking are effective in prompting quitting-related thoughts and actions, little research has been conducted among smokers in low- to middle-income countries to guide public education efforts.
METHOD: 2399 smokers aged 18-34 years in 10 low- to middle-income countries (Bangladesh, China, Egypt, India, Indonesia, Mexico, Philippines, Russia, Turkey and Vietnam) viewed and individually rated the same five anti-smoking ads on a standard questionnaire and then engaged in a structured group discussion about each ad. Multivariate logistic regression analysis, with robust Sres to account for the same individual rating multiple ads, was performed to compare outcomes (message acceptance, perceived personalised effectiveness, feel uncomfortable, likelihood of discussing the ad) across ads and countries, adjusting for covariates. Ads by country interactions were examined to assess consistency of ratings across countries.

RESULTS: Three ads with graphic imagery performed consistently highly across all countries. Two of these ads showed diseased human tissue or body parts, and a third used a disgust-provoking metaphor to demonstrate tar accumulation in smokers’ lungs. A personal testimonial ad performed more variably, as many smokers did not appreciate that the featured woman’s lung cancer was due to smoking or that her altered physical appearance was due to chemotherapy. An ad using a visual metaphor for lung disease was also more variable, mostly due to lack of understanding of the term ‘emphysema’.

CONCLUSION: Television ads that graphically communicate the serious harms of tobacco use are likely to be effective with smokers in low- to middle-income countries and can be readily translated and adapted for local use. Ads with complex medical terms or metaphors, or those that feature personal testimonials, are more variable and at least require more careful pre-testing and adaptation to maximise their potential.

PMID: 21994276 [PubMed - indexed for MEDLINE]


Abstract

The tobacco epidemic is an increasing threat to public health with the tobacco burden particularly high in WHO's South-East Asia Region (SEAR). The Region has many obstacles to tobacco control, but despite these challenges, significant progress has been made in many countries. Although much work still needs to be done, SEAR countries have nevertheless implemented strong and often innovative tobacco control measures that can be classified as "best practices," with some setting global precedents. The best practice measures implemented in SEAR include bans on gutka, reducing tobacco imagery in movies, and warning about the dangers of tobacco. In a time of scarce resources, countries in SEAR and elsewhere must ensure that the most effective and cost-efficient measures are implemented. It is hoped that countries can learn from these examples and as appropriate, adapt these measures to their own specific cultural, social and political realities.

PMID: 23442393 [PubMed - indexed for MEDLINE]


Abstract

Summary

This Regional Strategy for Tobacco Control primarily provides a longer-term strategic guidance to Member States of the South-East Asia Region to support them in formulating evidence-based policies and designing a sustained and cost-effective programme on tobacco control to counter successfully the rising public health concerns of tobacco use in the Region. The Region is home to around 250 million smokers and nearly the same number of smokeless tobacco users. About 1.3 million deaths occur every year, including around 160 000 deaths due to exposure to second-hand smoke. The increasing trend of tobacco use and its devastating effects pose a grave threat to the health and well-being of the people of the Region. Thus, the implementation of the Regional Strategy is expected to eventually protect the people of the Region from the enormous negative health, social, economic and environmental consequences of tobacco consumption and exposure to tobacco smoke.
An annotated bibliography of scientific studies done on tobacco topic in WHO South-East Asia Region countries


Summary

Health-care financing continues to be a contentious issue in most Member States of the WHO South-East Asia Region. While making an effort to address the concerns about health services delivery and accessibility, matters regarding mechanisms of financing and budgeting must also be taken into account. To this end, a collaborative and consultative Expert Group Meeting aiming at fostering ideas and exchanging thoughts was organized at WHO SEARO, New Delhi, India, on 13-14 June 2011. Following this meeting, the document titled Tobacco Taxation and Innovative Health-care Financing was developed. It highlights the empirical evidence and existing literature on tobacco taxation, the practices of earmarking taxes for specific projects or programmes in Member States, and innovative methods of financing health-care.


Summary

This profile on the implementation of the WHO Framework Convention on Tobacco Control in the South-East Asia Region provides an overview of the status of the implementation of the convention in the eleven Member States of the SEA Region. It highlights some major milestones achieved as well as the challenges faced while implementing tobacco control measures in Member countries.


Abstract

Using aggregated panel data taken from three waves of the Indonesian Family Life Survey (1993-2000), this article tests the myopic addiction behaviour of cigarette demand. Sensitivity analysis is done by examining a rational addiction behavior of cigarette demand. The results provide support for myopic addiction. The short- and long-run price elasticities of cigarette demand are estimated at -0.28 and -0.73 respectively. Excise taxes are more likely to act as an effective tobacco control in the long-run rather than a major source of government revenue.

PMID: 20644684 [PubMed - indexed for MEDLINE] PMCID: PMC2905561


Abstract not available


Abstract

Comprehensive tobacco control policies include high taxes. This paper describes the tobacco excise structure in Indonesia from 2007 to 2009. The design of the tobacco excise system contributes to neutralizing the effect of a tax increase on consumption. Wide gaps in tax rates allow for the availability of low-priced products, and consumers can substitute to cheaper products in response to price increases. There has been no systematic increase in the tax rates, which promotes affordable of tobacco products. Firms can reduce their prices at point of sale and absorb the tax increase instead of passing it onto consumers. Tiered tax rates by production scale allow firms to evade paying the highest tax brackets legally, thereby increasing profit margins while reducing prices at point of sale. Increases in tobacco excise rates in Indonesia may not have a large health impact under the current system of tax administration.

PMID: 19597454 [PubMed - indexed for MEDLINE]

Summary

Since 2007 the Bloomberg Global Initiative to Reduce Tobacco Use (BGI) is being implemented in the South-East Asia Region. Four countries from the Region - Bangladesh, India, Indonesia and Thailand - were selected as priority countries under the Initiative. In 2007 both human and financial support was provided to these countries to strengthen their capacity for tobacco control. The WHO South-East Asia Region was the first and only Region to have organized an orientation workshop for all BGI staff. The workshop was found to be useful for the implementation of the Initiative in the Region. It has also enhanced the knowledge and team spirit of the whole BGI team and provided a unique opportunity to discuss and share the challenges that the Initiative is facing in terms of coordination for effective implementation. The workshop provided the platform to discuss and decide on a common approach to take the Initiative to its logical fruition.


Abstract

OBJECTIVES: Indonesia has the fifth highest rate of annual cigarette consumption per person of all countries worldwide. The Global Youth Tobacco Survey (GYTS) was developed to provide data on youth tobacco use to countries for their development of youth-based tobacco control programs. Data in this report can be used as baseline measures for future evaluation of the tobacco control program implemented by Indonesia's Ministry of Health.

METHODS: The 2006 Indonesia GYTS is a school-based survey that included separate samples for Java and Sumatera, representing more than 84% of the population of Indonesia. Each sample used a two-stage cluster sample design that produced representative samples of students in secondary grades 1-3, which are associated with ages 13-15 years.

RESULTS: This report shows that more than 1 in 10 students (12.6%) currently smoked cigarettes, with the prevalence among boys (24.5%) significantly higher than among girls (2.3%). Of the students who currently smoked, more than 7 in 10 (75.9%) reported that they desired to stop smoking now. Regarding secondhand smoke exposure, more than 6 in 10 students (64.2%) reported that they were exposed to smoke from other people in their home during the week before the survey. More than 9 in 10 students (92.9%) had seen a lot of advertisements for cigarettes on billboards during the past month and more than 8 in 10 (82.8%) had seen a lot of advertisements for cigarettes in newspapers or in magazines.

CONCLUSIONS: Tobacco control in Indonesia will likely not move forward until the government evaluates and strengthens existing laws, considers passing new strong laws, and develops protocols for enforcing all laws. The Indonesian government also should strongly consider accession to the World Health Organization Framework Convention on Tobacco Control.

PMID: 18585772 [PubMed - indexed for MEDLINE]
Abstract

Project Quit Tobacco International is a pioneering attempt to develop culturally appropriate approaches to tobacco cessation within the health sectors of India and Indonesia. An overview of the formative research that contributed to intervention development is presented followed by a discussion of the research design adopted to evaluate the introduction of tobacco cessation in medical schools and clinics chosen for pilot testing. Four stages of research and implementation are described as a means of providing colleagues in developing countries with a prototype for future tobacco cessation research and training efforts.

PMID: 16723669 [PubMed - indexed for MEDLINE] PMCID: PMC2563546


Abstract

Using published data about consumption, economic aspects, and legislation, this paper analyzes tobacco control in Indonesia, a major consumer and producer of tobacco products. Given its large population and smoking prevalence, Indonesia ranks fifth among countries with the highest tobacco consumption globally. Over 62% of Indonesian adult males smoke regularly, contributing to a growing burden of non-communicable diseases and enormous demands on the health care system. Tobacco control policies, however, have remained low on the political and public health agenda for many years. One reason was the contribution of tobacco to government revenues and employment, particularly in the industrial sector. But tobacco’s importance in employment has fallen significantly since the 1970s from 38% of total manufacturing employment compared with 5.6% today. Widespread use of tobacco since the 1970s and the concomitant burden of non-communicable diseases have given rise to a more balanced view of the costs and benefits of tobacco production over the last decade. The first tobacco control regulation passed in 1999, succeeded by amendments in 2000 and 2003. Today, few restrictions exist on tobacco industry conduct, advertising, and promotion in Indonesia. We examine the relevance and prospects of advancing in Indonesia four cost-effective tobacco control strategies: price and tax measures, advertising bans, clean air legislation, and public education. We conclude with several suggestions for action for the public health community.


Abstract

This report describes a pilot cessation study aimed to test well-proven approaches to helping smokers quit in a resource-poor setting. The group-randomized trial (by village) included 788 poor smokers in 18 villages. Participants were assigned to one of three intervention groups: counseling only, nicotine patches only, and a combination of both. 47 people dropped out soon after the interventions began. Quit rates varied across the intervention groups, and were significantly higher for the two groups that received counseling. Whether or not the counseling groups received nicotine patches made little difference to outcomes. The 12-month continuous abstinence rates were 17 percent for the counseling only group, 15 percent for the counseling plus NRT group, and 7 percent for the group that received nicotine patches only. The results suggest that cessation support programs could be successful and cost effective in Indonesia, and achieve comparable results to similar efforts in America, Canada, Australia, the UK and Europe.

4. Tobacco Promotion-Advertising and sponsorship

McCall C. Tobacco advertising still rife in Southeast Asia. The Lancet. 2014; 384(9951), 1335-6. doi:http://dx.doi.org/10.1016/S0140-6736(14)61804-3
Abstract

Cigarette advertisements can be found on electronic billboards at airports, on point-of-sale adverts at small shops selling cigarettes along with other day-to-day items, and even on banners over Indonesia's trademark warung—the small roadside restaurants where millions of consumers eat lunch daily. In a statement (appendix), Julie Soderlund, PMI's vice-president of communications, denied promoting tobacco products through disaster relief and said its contributions programmes were aimed at improving living conditions. Tobacco companies have met attempts to restrict advertising with legal challenges, attempting, for example, to place adverts on the roof of a building selling cigarettes, saying this represented legal point-of-sale advertising.


Abstract

INTRODUCTION: Article 13 of the Framework Convention on Tobacco Control (FCTC) calls for a comprehensive ban on tobacco advertising, promotion, and sponsorship (TAPS), and Article 16 calls for prohibition of tobacco sales to and by minors. Although these mandates are based on sound science, many countries have found provision implementation to be rife with challenges.

OBJECTIVE: This paper reviews the history of tobacco marketing and minor access restrictions in high-, middle-, and low-income countries, identifying past challenges and successes. We consider current challenges to FCTC implementation, how these barriers can be addressed, and what research is necessary to support such efforts. Specifically, we identify implementation and research priorities for FCTC Articles 13 and 16.

DISCUSSION: Although a solid evidence base underpins the FCTC's call for TAPS bans and minor access restrictions, we know substantially less about how best to implement these restrictions. Drawing on the regulatory experiences of high-, middle-, and low-income countries, we discern several implementation and research priorities, which are organized into 4 categories: policy enactment and enforcement, human capital expertise, the effects of FCTC marketing and youth access policies, and knowledge exchange and transfer among signatories. Future research should provide detailed case studies on implementation successes and failures, as well as insights into how knowledge of successful restrictions can be translated into tobacco control policy and practice and shared among different stakeholders.

CONCLUSION: Tobacco marketing surveillance, sales-to-minors compliance checks, enforcement and evaluation of restriction policies, and capacity building and knowledge transfer are likely to prove central to effective implementation.

PMID: 23291641 [PubMed - indexed for MEDLINE] PMCID: PMC3601914


Abstract

BACKGROUND: Tobacco advertising in Indonesia is among the most aggressive and innovative in the world, and tobacco advertisements saturate the environment. Tobacco companies are politically and financially powerful in the country because they are one of the largest sources of government revenue. As a result, there are few restrictions on tobacco marketing and advertising. National surveys reveal that 62% of men and 1% to 3% of women are smokers. Over 90% of smokers smoke clove cigarettes (kretek). This paper examines the social and cultural reasons for smoking in Indonesia and discusses how the tobacco industry reads, reproduces and works with culture as a means of selling cigarettes. An analysis is provided of how kretek tobacco companies represent themselves as supporters of Indonesian national identity. This analysis is used to identify strategies to break the chains of positive association that currently support widespread smoking.
METHODS: Between November 2001 and March 2007, tobacco advertisements were collected from a variety of sources, including newspapers and magazines. Frequent photographic documentation was made of adverts on billboards and in magazines. Advertisements were segmented into thematic units to facilitate analysis. In all, 30 interviews were conducted with smokers to explore benefits and risks of smoking, perceptions of advertisements and brand preferences. Focus groups (n = 12) were conducted to explore and pretest counter advertisements.

RESULTS: Key themes were identified in tobacco advertisements including control of emotions, smoking to enhance masculinity and smoking as a means to uphold traditional values while simultaneously emphasising modernity and globalisation. Some kretek advertisements are comprised of indirect commentaries inviting the viewer to reflect on the political situation and one's position in society.

CONCLUSIONS: After identifying key cultural themes in cigarette advertisements, our research group is attempting to engage the tobacco industry on "cultural ground" to reduce consumption and social acceptability. To do this, we need to take back social spaces that the tobacco industry has laid claim to through advertising. Active monitoring and surveillance of tobacco advertising strategies is necessary and legislation and enforcement to curb the industry should be put in place.

PMID: 19033331 [PubMed - indexed for MEDLINE]

5. Economics of tobacco including interference of tobacco industry


Abstract

This publication introduces a series of six other publications describing the toxicological assessment of kretek cigarettes, i.e., cigarettes characterized primarily by the use of a significant amount of cloves as an ingredient added to the tobacco. This paper presents background information on kretek cigarettes, describes the general approach of the in vitro and in vivo toxicological assessment of mainstream smoke from kretek cigarettes, presents the methodology used, and summarizes the results of the assessment program. In summary, the smoke from kretek cigarettes gives rise to the typical cigarette smoke-related effects known from American-blended cigarettes, does not reveal any novel toxicity, and exhibits an unexpected distinct attenuation of pulmonary inflammation. Based on equal amounts of smoke total particulate matter (TPM), kretek cigarettes deliver less toxicants when compared to American-blended cigarettes; when assessed in vitro, the smoke from kretek cigarettes is less cytotoxic (gas/vapor phase) and less mutagenic (TPM). When assessed in vivo, kretek cigarette smoke shows lower toxicity in the respiratory tract. When based on an equal nicotine basis, several of the toxicity endpoints in kretek cigarettes become equivalent to American-blended cigarettes. The data do not indicate an increased hazard potential of kreteks compared to American-blended cigarettes.

PMID: 25498000[PubMed - in process]


Abstract

BACKGROUND: Illicit cigarettes comprise more than 11% of tobacco consumption and 17% of consumption in low- and middle-income countries. Illicit cigarettes, defined as those that evade taxes, lower consumer prices, threaten national tobacco control efforts, and reduce excise tax collection.

METHODS: This paper measures the magnitude of illicit cigarette consumption within Indonesia using two methods: the discrepancies between legal cigarette sales and domestic consumption estimated from surveys, and discrepancies between imports recorded by Indonesia and exports recorded by trade partners. Smuggling plays a minor role in the availability of illicit cigarettes because Indonesians predominantly consume kreteks, which are primarily manufactured in Indonesia.

RESULTS: Looking at the period from 1995 to 2013, illicit cigarettes first emerged in 2004. When no respondent under-reporting is assumed, illicit consumption makes up 17% of the domestic market in 2004, 9% in 2007, 11% in 2011, and 8% in 2013. Discrepancies in the trade data indicate that Indonesia was a recipient of smuggled cigarettes for each year between 1995 and 2013. The value of this illicit trade ranges from less than $1 million to nearly $50 million annually. Singapore, China, and Vietnam together accounted for nearly two-thirds of trade
discrepancies over the period. Tax losses due to illicit consumption amount to between Rp 4.1 and 9.3 trillion rupiah, 4% to 13% of tobacco excise revenue, in 2011 and 2013.

CONCLUSIONS: Due to the predominance of kretek consumption in Indonesia and Indonesia’s status as the predominant producer of kretes, illicit domestic production is likely the most important source for illicit cigarettes, and initiatives targeted to combat this illicit production carry the promise of the greatest potential impact.

PMID: 25406595[PubMed - as supplied by publisher] PMCID: PMC4251944


Abstract

OBJECTIVES: To monitor and analyse impacts of the interaction between tobacco excise tax policy and industry price strategy, on the price level and variation of cigarettes sold in five Southeast Asian countries (Indonesia, Cambodia, Lao PDR, the Philippines and Vietnam).

METHODS: Prices of cigarette sold by sticks and packs were collected through an in-person survey of retailers during 2011. Mean cigarette prices and price variation were calculated in each study country for single cigarettes, whole packs and brand groups.

RESULTS: Price variation of whole packs was greater in countries with ad-valorem excise tax structures (Cambodia, Lao PDR and Vietnam) than in countries with multi-tiered specific excise taxes (Indonesia and the Philippines). The price variation for single sticks appeared to be driven by local currency denomination. Cigarettes sold individually cost more per stick than cigarettes sold in whole packs in every brand group except for Indonesia's domestic brands.

CONCLUSIONS: Tobacco industry strategy and excise tax structure drove the price level and variation of cigarettes sold in packs, while currency denominations influence the selling price of single sticks. To maximise the effectiveness of tobacco tax policies, countries should adopt specific excise tax structures to decrease cigarette price variation, which would minimise opportunities for smokers to 'trade down' to a cheaper brand to avoid a tax-driven price increase.

PMID: 24500266[PubMed - as supplied by publisher]


Abstract

BACKGROUND: Following the passage of the Family Smoking Prevention and Tobacco Control Act in 2009, flavoured cigarettes, including clove cigarettes, were banned based on the rationale that such cigarettes appealed to youth. However, the ban on characterising flavours was not extended to cigars.

METHODS: This study reviewed industry documents from Kretek International, the parent company behind Djarum clove cigars, to document the changes in their marketing and production strategies following the flavour ban on cigarettes. To assess sales trends following the ban, data for clove cigar sales in the USA from 2009 to 2012 were analysed using Nielsen's Convenience Track retail scanner database. Additionally, data on tobacco imports to the USA from Indonesia were obtained from the USDA Foreign Agricultural Service’s Global Agricultural Trade System for the years 2008–2012.

RESULTS: In anticipation of Food and Drug Administration’s (FDA) flavour ban on cigarettes and recognising the regulatory advantages of cigars, Kretek International began developing Djarum clove cigars in 2007. Immediately following the flavour ban, sales of this product increased by more than 1400% between 2009 and 2012. During this same period, tobacco imports to the USA from Indonesia, a leader in clove tobacco production, shifted from cigarettes to almost exclusively cigars.
CONCLUSIONS: Kretek International, like other tobacco manufacturers, manipulated its products following the Family Smoking Prevention and Tobacco Control Act as a way to capitalise on regulatory loopholes and replace its now banned clove cigarettes. As a result, consumption of the company's Djarum clove cigars increased exponentially in recent years.

PMID: 24652459 [PubMed - as supplied by publisher]


Abstract

Indonesia recently brought a successful claim against a U.S. law that prohibits cigarettes with a characterizing flavor other than menthol or tobacco. 1. Indonesia succeeded in arguing that the regulation discriminates against clove-flavored cigarettes of Indonesian origin in favor of menthol-flavored cigarettes of U.S. origin. 2. Also in the WTO context, the Dominican Republic, Honduras, and Ukraine have challenged an Australian law prohibiting the presence of branding on tobacco packaging other than product and variant names in a standardized location, font size, and style. 3. This regulation, commonly referred to as "plain packaging," is the first of its kind and may represent a turning point in the regulation of tobacco packaging. 4. More broadly, the tobacco industry has launched a new wave of international litigation. 5. Outside of the WTO, Philip Morris has also been active in using trade and investment agreements to challenge tobacco control measures directly. 6. Sanitary or phytosanitary measures include all relevant laws, decrees, regulations, requirements and procedures including, inter alia, end product criteria; processes and production methods; testing, inspection, certification and approval procedures; quarantine treatments including relevant requirements associated with the transport of animals or plants, or with the materials necessary for their survival during transport; provisions on relevant statistical methods, sampling procedures and methods of risk assessment; and packaging and labelling requirements directly related to food safety. 7. Accordingly, most product regulations in the food context, and food labeling measures, will fall within the scope of the SPS Agreement rather than the TBT Agreement. 8. In the alcohol context, some measures fall outside the scope of the TBT Agreement and others fall within the scope of the SPS Agreement.

PMID: 23815031 [PubMed - indexed for MEDLINE]


No abstract available

PMID: 23296586 [PubMed - indexed for MEDLINE] PMCID: PMC3563903


http://www.searo.who.int/tobacco/data/en/

Summary:

Over the past 20 years, with the liberalization of international trade, trade in tobacco and tobacco products has rapidly expanded. This has led to a corresponding rise in tobacco consumption across low- and middle-income countries since the 1980s, and poses a major threat to global public health. This phenomenon highlights the inevitable connection between international trade agreements and the tobacco control policies ensnared in the WHO Framework Convention on Tobacco Control (FCTC). An Expert Intercountry Consultation on Tobacco and Trade was held at the WHO Regional Office for South-East Asia, New Delhi on 3-4 October 2012. A total of 31 participants from the ministries of health, trade and, agriculture and legal offices from nine Member States as well as WHO staff from WHO country offices in Bangladesh, India, Indonesia, Myanmar and Nepal attended. Recommendations for the Member States were: (1) establishing and strengthening coordination between the ministries of health and trade on policies and regulations on trade and investment relating to tobacco and tobacco products; (2) promoting advocacy on health perspectives of international and investment agreements; (3) strengthening full implementation of the WHO FCTC; (4) mobilizing more funds for tobacco control in the Member States; (5) ensuring law enforcement and public compliance; and (6) conducting research on health cost studies and alternative livelihood for tobacco farmers. It was recommended that WHO should strengthen the capacities of Member States on health perspectives of international trade and investment agreements.
Summary

There is a fundamental and irreconcilable conflict between the interests of the tobacco industry and public health policy. On the one hand, the tobacco industry produces and promotes a product that has been scientifically proven to be highly addictive and harmful, and which exacerbates social ills, including poverty. On the other hand, governments and the public health sector try to improve the health of the population by implementing measures to reduce tobacco use. As the countries work towards developing and enforcing tobacco control measures, interference by the tobacco industry to counter these measures increases. The growing, manufacturing, distribution and selling components of the tobacco industry get involved in such interference through different means. Article 5.3 of the WHO Framework Convention on Tobacco Control and its Guidelines recommend how such interference should be addressed. Nineteen delegates from different sectors of 10 countries of the WHO South-East Asia Region attended a regional meeting on countering tobacco industry interference, from 19-21 March 2013, at the WHO Regional Office for South-East Asia, New Delhi, to analyse this issue and formulate strategies to address it. The recommendations for the Member States were to: (1) review and revise as needed, the terms of reference of the national tobacco control focal points; (2) formulate and implement, within one year, a communication strategy to raise awareness among various government and nongovernment stakeholders about tobacco industry interference and measures to counter it; (3) develop and implement a sustainable and systematic national and regional monitoring mechanism to ensure that information related to the tobacco industry is current and accurate; (4) review, and where not available, formulate a code of conduct for national officials that provides guidance on how to prevent conflicts of interest, real or perceived, between the civil service, elected officials and other national officials and the tobacco industry interests; and (5) review, and where not available, formulate rules for interaction between government and the tobacco industry, based on Guidelines for Article 5.3 of the WHO Framework Convention on Tobacco Control.


Abstract

A recent trade dispute between the USA and Indonesia, overseen by the World Trade Organization, challenges piecemeal approaches to tobacco regulation.

PMID: 22821796 [PubMed - indexed for MEDLINE]


Abstract

BACKGROUND: Indonesia is the world's fifth largest cigarette market in the world but for decades, transnational tobacco companies (TTCs) have had limited success infiltrating this market, due to their inability to compete in the kretek market. Kretexs are clove/tobacco cigarettes that most Indonesians smoke.

OBJECTIVE: To determine how Phillip Morris International (PMI) and British American Tobacco (BAT) have now successfully achieved a substantial market presence in Indonesia.

METHODS: We analyzed previously secret, tobacco industry documents, corporate reports on Indonesia operations, the Tobacco Trade press, Indonesia media, and "The Roadmap".

RESULTS: Internal, corporate documents from BAT and PMI demonstrate that they had known for decades that kretexs are highly carcinogenic. Despite that knowledge, BAT and PMI now own and heavily market these products, as well as new more westernized versions of kretexs. BAT and PMI used their successful basic strategy of keeping cigarettes affordable by maintaining the social responsibility of smoking and opposing smoke-free workplace laws but in the 21st century, they added the acquisition of and westernisation of domestic kretex manufacturers as an additional strategy. These acquisitions allowed them to assert influences on health policy in Indonesia and to grow their business under current government policy embodied in the 2007-2020 Roadmap of
Indonesia

An annotated bibliography of scientific studies done on tobacco topic in WHO South-East Asia Region countries

Tobacco Products Industry and Excise Policy which calls for increased cigarette production by 12% over the next 15 years.

CONCLUSION: PMI and Bat have successfully entered and are expanding their share in the Indonesia cigarette market. Despite the obvious and pervasive influence of the tobacco industry on policy decisions, the Indonesian government should ratify the FCTC and implement effective legislation to reduce tobacco consumption and exposure to tobacco smoke and revise the Roadmap to protect future generations of Indonesians.

PMID: 21852413 [PubMed - indexed for MEDLINE] PMCID: PMC3914664


Abstract

On Jun 22, 2009, Pres Obama signed into law the Family Smoking Prevention and Tobacco Control Act, which banned the sale of all flavored cigarettes except for menthol. On Jul 20, 2010, Indonesia requested the establishment of a Panel of the World Trade Organization’s (WTO) Dispute Settlement Body to determine if the ban is inconsistent with various US obligations as a member of the WTO. Indonesia, the largest exporter of clove cigarettes to the US before the ban, argues that the Act discriminates against Indonesian-produced clove cigarettes, thereby violating Article III of the General Agreement on Tariffs and Trade. The US ban on flavored cigarettes violates its WTO obligations. Under an Article III:4 analysis, clove and menthol cigarettes are "like products" because they are in a competitive relationship, share the same end-use and are used by consumers to fulfill that end-use, have almost identical tariff classifications, and are physically similar.


Summary

This strategy sets out the objectives and priority activities for resource mobilization for 2010-2011 to ensure effective implementation of the Strategic Action Plan for Tobacco Control in South-East Asia Region. It provides strategic approaches and guidance on the major steps for resource mobilization highlighting the process of assessment for resource requirement and the potential for raising it; analysis of donor intelligence, building alliance and carrying out advocacy. It emphasizes on the need to diversify funding sources for sustainable financing to the programme and also on the importance of realistic programme development and management of resources.


Abstract

Children contribute substantially to the workforce needed to produce tobacco in Indonesia. Drawing on 18 months of ethnographic fieldwork, I discuss the reasons behind children’s economic involvement in tobacco cultivation in the eastern region of the island of Lombok in eastern Indonesia. I explore children’s paid work in the plantations by looking at the three dimensions of their economic lives: the local economy, their households and their individual lives. I address the tension between children’s agency and the systems that constrain it.

Abstract

Mainstream economic theory outlines four main causes of market failure and it is already well established that two of these (information failure and externalities) exist in a tobacco market. A third cause of market failure, market power, is also a serious problem in many tobacco markets. Market power—combined with unintended and often overlooked consequences of tobacco tax policies, notably that gradual increases in specific taxes may allow the industry to disguise significant price increases—has, at least in high income countries, given cigarette manufacturers considerable pricing power and profits. This paper examines ways this market failure could be addressed and proposes as a solution a system of price cap regulation wherein a cap is placed on the pre-tax cigarette manufacturers' price but not on the retail price that consumers face. Well established in the utilities industry, price cap regulation would set a maximum price that cigarette companies can charge for their product based on an assessment of the genuine costs each firm faces in its operations and an assumption about the efficiency savings it would be expected to make. Such a system would achieve three main benefits. First, it would address the problem of market failure and excess profits while simultaneously allowing current tobacco control policies, including tax and price increases, to continue to increase. Second, it would increase government revenue by transferring the excess profits from the industry to the government purse. Third, it would bring numerous public health benefits. In addition to addressing market power, while simultaneously allowing tobacco control policies to expand, it could offer a means of preventing down-trading to cheaper products and controlling unwanted industry practices such as cigarette smuggling, price fixing and marketing to the young. The paper outlines in some detail how such a system might be developed in the UK, while briefly exploring how it could be applied elsewhere, including in markets with state monopolies.

PMID: 20876078 [PubMed - indexed for MEDLINE] PMCID: PMC2981493


Abstract

Of the members of the Association of Southeast Asian Nations (ASEAN), all but Indonesia have embraced the Framework Convention on Tobacco Control and all endorse some form of tobacco control policy. Nevertheless, except for Brunei, all these states are, to varying degrees, complicit in investing in or promoting the tobacco industry, often using the justification of poverty alleviation. Tobacco use is the major preventable cause of illness and death among the populations of these countries. Claims that tobacco alleviates poverty in developing countries have increasingly been discredited: thus continuing state support for the industry represents a fundamental paradox. Using primary documents from governments and the tobacco industry, and published studies investigating tobacco and poverty, this article explores the contradictions inherent in the state seeking to prevent tobacco use in the interests of health, while actively promoting tobacco for the economic benefit of its citizens. These contradictions result in both symbolic and substantial harm to tobacco control efforts: tobacco production is legitimized, rational policy principles are violated, direct cooperation between the state and multinational tobacco corporations is made possible with associated opportunities for mollifying control policies, and different state agencies work at cross purposes. Although tobacco exports within the Association of Southeast Asian Nations (ASEAN) also threaten the group's health solidarity, it is argued that divestiture of state ownership of capital in tobacco corporations and a commitment by states not to promote tobacco are urgently required if the Convention is to have full effect both in the countries of the region and in other states that have ratified it.

PMID: 20595353 [PubMed - indexed for MEDLINE]


Abstract

In the half century since the 1959 Cuban Revolution, El Habano remains the premium cigar the world over; but both before and since 1959, the seed, agricultural and industrial know-how, and human capital have been transplanted to replicate that cigar in a process accentuated by upheavals and out-migration. The focus here is on a little-known facet of the interconnected island and offshore Havana cigar history, linking Cuba with Connecticut and Indonesia: from when tobacco was taken from the Americas to Indonesia and gave rise to the famed Sumatra cigar wrapper leaf; through the rise and demise of its sister shade wrapper in Connecticut, with Cuban and Sumatra seed, ultimately overshadowed by Indonesia; and the resulting challenges facing Cuba today. The article highlights the role of Dutch, U.S, British, and Swedish capital to explain why in 2009 the two
major global cigar corporations, British Imperial Tobacco and Swedish Match, were lobbying Washington, respectively, for and against the embargo on Cuba. As the anti-smoking, anti-tobacco lobby gains ground internationally, the intriguing final question is whether the future lies with El Habano or smokeless Swedish snus.

PMID: 21506307 [PubMed - indexed for MEDLINE]


Abstract

Comprehensive tobacco control policies include high taxes. This paper describes the tobacco excise structure in Indonesia from 2007 to 2009. The design of the tobacco excise system contributes to neutralizing the effect of a tax increase on consumption. Wide gaps in tax rates allow for the availability of low-priced products, and consumers can substitute to cheaper products in response to price increases. There has been no systematic increase in the tax rates, which promotes affordable of tobacco products. Firms can reduce their prices at point of sale and absorb the tax increase instead of passing it onto consumers. Tiered tax rates by production scale allow firms to evade paying the highest tax brackets legally, thereby increasing profit margins while reducing prices at point of sale. Increases in tobacco excise rates in Indonesia may not have a large health impact under the current system of tax administration.

PMID: 19597454 [PubMed - indexed for MEDLINE]


Abstract

Implementing the maximum legally allowable tobacco tax rates could prevent between 1.7 and 4.0 million tobacco-related deaths among smokers and generate additional revenues of US$ 3.2 to 6.5 billion. Doubling the tobacco tax could increase employment by more than one quarter of a million jobs.


Abstract

Significantly, Indonesia is also one of the largest tobacco markets in the world, with smoking rates in excess of 60% for adult males and 20% for 10-year-old males. Altria, the parent company of US cigarette giant Philip Morris (PM), recently acquired Sampoema, Indonesia's second-largest cigarette manufacturer, and appears poised to exploit the virtual absence of tobacco industry regulation in that country. Positive initiatives such as harm reduction, youth smoking prevention, and adult cessation programs are part of a strategy employed by PM in the United States in response to public health initiatives. PM's involvement in the Indonesian tobacco market emphasizes the need for public health advocates to pressure multinational tobacco companies to support the principles of the Framework Convention on Tobacco Control.


Abstract

OBJECTIVE: To examine the strategies employed by transnational tobacco companies (TTCs) to compete more effectively compete with the dominant kretak manufacturers in Indonesia, and to consider implications of their failure.

METHODS: Systematic analysis of corporate documents obtained from British American Tobacco's (BAT's) Guildford depository and from industry and tobacco control websites document collections.
**RESULTS:** The limited progress of the TTCs in Indonesia is best explained by the distinctive political economy of its tobacco industry. Though effective when collaborating on regulatory issues of mutual interest, TTCs have been less able than kretek manufacturers to exercise political influence where their interests conflict. Global strategies of TTCs have undergone significant local adaptation in attempting to compete in this distinctive environment. While maintaining uniformity in core brand attributes, TTCs have sought to reconcile international imagery with local norms, particularly to appeal to women. BAT unsuccessfully attempted to develop clove based products that imitated the appeal of kretaks, withdrawn following concerns about exposing the company to charges of operating double standards.

**CONCLUSIONS:** The documents presented highlight the complexity of the global tobacco industry. Tobacco control efforts need to address more effectively the ongoing impact of kretaks while recognising the distinctive threats posed by TTCs.

PMID: 15564227 [PubMed - indexed for MEDLINE] PMCID: PMC1766160

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Abstract - Not Available

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Abstract

This report summarizes the health consequences and costs associated with tobacco use. It reviews price trends for tobacco products in Bangladesh, India, Indonesia, Nepal, Thailand and Sri Lanka. It reports trends in government tobacco tax revenues and how tobacco products are currently taxed in these countries, and in Maldives and Myanmar. The third section examines the demand for tobacco products in south-east Asian countries. A literature review on the demand for tobacco products in developing countries is followed by new analysis using time series and household-level data. The revenue-generating potential of tobacco taxes in south-east Asian countries is discussed. Finally, the report discusses contraband trade in tobacco products in South-East Asia, with emphasis on the industry’s alleged role in smuggling.
MALDIVES

1. Tobacco use Surveillance (surveys and reports)

1.1. Youth in general


Abstract

BACKGROUND: At least two rounds of the Global Youth Tobacco Survey (GYTS) have been completed in most of the countries in the World Health Organization South-East Asia region. Comparing findings from these two rounds provides trend data on smokeless tobacco (SLT) use for the first time.

METHODS: This study uses GYTS data from Bangladesh, Bhutan, India, Indonesia, Maldives, Myanmar, Nepal, Sri Lanka, Thailand, and Timor-Leste during 2006-2013. GYTS is a nationally representative survey of 13-15-year-old students using a consistent and standard protocol. Current SLT use is defined as using any kind of SLT products, such as chewing betel quid or non betel quid or snuffing any other products orally or through the nasal route, during the 30 days preceding the survey. Prevalence and 95% confidence intervals were computed using SAS/SUDAAN software.

RESULTS: According to most recent GYTS data available in each country, the prevalence of current use of SLT among youth varied from 5.7% in Thailand to 23.2% in Bhutan; among boys, from 7.1% in Bangladesh to 27.2% in Bhutan; and among girls, from 3.7% in Bangladesh to 19.8% in Bhutan. Prevalence of SLT was reported significantly higher among boys than girls in Bhutan (boys 27.2%; girls 19.8%), India (boys 11.1%; girls 6.0%), Maldives (boys 9.2%; girls 2.9%), Myanmar (boys 15.2%; girls 4.0%), and Sri Lanka (boys 13.0%; girls 4.1%). Prevalence of current SLT use increased in Bhutan from 9.4% in 2009 to 23.2% in 2013, and in Nepal from 6.1% in 2007 to 16.2% in 2011.

CONCLUSION: The findings call for countries to implement corrective measures through strengthened policy and enforcement.

PMID: 25526249 [PubMed - in process]

1.1.1. Global Youth Tobacco Survey (GYTS)


Abstract

BACKGROUND: The government of Maldives has taken steps to control the tobacco use in the country mainly through awareness creation and encouraging community participation. Any form of tobacco use promotion and advertising of tobacco products have been banned in the local media. The government of Maldives ratified the World Health Organization Framework Convention on Tobacco Control (WHO FCTC) in the year 2006. Maldives conducted the Global Youth Tobacco Survey (GYTS) in the years 2003 and 2007 in an effort to track tobacco use among adolescents.

METHODS: The GYTS is a school-based survey of students aged 13-15 years. The GYTS was conducted in the regions urban (capital Male’) and the rural (atoll community). Representative national estimates for Maldives were used in this study in 2003 and 2007.
RESULTS: Between 2003 and 2007, a significant reduction in the proportion of students currently smoked cigarettes is observed (a fall from overall prevalence among 13-15 year olds of 6.9% to 3.8%). Reported use of other tobacco products also decreased during the period from 8.3% to 3.5%. Over the period, peer cigarette smoking reduced significantly although exposure to SHS at home and in public places did not change and stayed significantly high. There is very high demand from these children to ban smoking in public places (almost 90% of the children expressed this desire in both years). The ability to purchase cigarettes in a store did not change significantly and in fact the proportion that were not refused purchase of cigarettes in store because of their age increased from 78.5% to 83.2% during the period.

CONCLUSIONS: The GYTS data from 2003 and 2007 has shown that there is a reduction in youth tobacco consumption. While there is a reduction in tobacco use, accessibility to tobacco use for young children and exposure to second hand smoking both at home and in public places are seen to remain quite high with almost no change. The fact that despite these facilitating factors a reduction has occurred shows that eliminating such enabling factors, the youth tobacco use can be brought to almost a complete halt. With vigorous awareness campaigns and levying of regulations, young persons are still in access to and exposed to tobacco consumption. Strict legislative anti tobacco measures are needed for more effective enforcement of such regulations.


Abstract
Tobacco use is widely entrenched in the South-East Asia (SEA) Region leading to high morbidity and mortality in this region. Several studies revealed that tobacco use is widespread among youth and school children. Exposure to second-hand smoke was reported as around 50% or more in three countries - Myanmar (59.5%), Bangladesh (51.3%), and Indonesia (49.6%). Health profession students encompassing medical, dental, nursing and pharmacy disciplines, and even qualified health professionals are no exception from tobacco use. While they are regarded as role models in tobacco cessation programs, their tobacco addiction will carry a negative impact in this endeavour. A mere inquiry about the smoking status of patients and a brief advice by doctors or dentists increases quit rates and prompts those who have not thought about quitting to consider doing so. Evidence from some randomized trials suggests that advice from motivated physicians to their smoking patients could be effective in facilitating cessation of smoking. However, the low detection rate of smokers by many physicians and the small proportion of smokers who routinely receive advice from their physicians to quit have been identified as a matter of concern. This paper describes the role and issues of involvement of health professionals in tobacco control. Data from a variety of sources is used to assess the status. Although there are some differences, tobacco use is widespread among the students and health professional students. Exposure to second hand smoke is also a matter of concern. Tobacco-related problems and tobacco control cut across a vast range of health disciplines. Building alliances among the health professional associations in a vertical way will help synergize efforts, and obtain better outcomes from use of existing resources. Health professional associations in some countries in the SEA region have already taken the initiative to form coalitions at the national level to advance the tobacco control agenda. In Thailand, a Thai Health Professional Alliance against Tobacco, with 17 allies from medical, nursing, traditional medicine, and other health professional organizations, is working in a concerted manner toward promoting tobacco control. Indian Dental Association intervention is another good example.

PMID: 23442394 [PubMed - indexed for MEDLINE]

1.2. Educational Personnel and other professionals

1.2.1 Global School Personnel Survey(GSPS)


Abstract

BACKGROUND: Worldwide, use of tobacco is viewed as an important threat to the health of pregnant women and their children. However, the extent of tobacco use in pregnant women in low-income and middle-income countries (LMICs) remains unclear. We assessed the magnitude of tobacco use in pregnant women in LMICs (including Maldives).

METHODS: We used data from Demographic and Health Surveys (DHS) done in 54 LMICs between Jan 1, 2001, and Dec 1, 2012, comprising 58,922 pregnant women (aged 15-49 years), which were grouped by WHO region. Prevalence of current tobacco use (smoked and smokeless) was estimated for every country. Pooled estimates by regions and overall were obtained from random-effects meta-analysis.

FINDINGS: Pooled prevalence of any tobacco use in pregnant women in LMICs was 2·6% (95% CI 1·8-3·6); the lowest prevalence was in the African region (2·0%, 1·2-2·9) and the highest was in the Southeast Asian region (5·1%, 1·3-10·9). The pooled prevalence of current tobacco smoking in pregnant women ranged from 0·6% (0·3-0·8) in the African region to 3·5% (1·5-12·1) in the Western Pacific region. The pooled prevalence of current smokeless tobacco use in pregnant women was lowest in the European region (0·1%, 0·0-0·3) and highest in the Southeast Asian region (2·6%, 0·0-7·6).

INTERPRETATION: Overall, tobacco use in pregnant women in LMICs was low; however high prevalence estimates were noted in some LMICs. Prevention and management of tobacco use and exposure to second-hand smoke in pregnancy is crucial to protect maternal and child health in LMICs.

Comment in


PMID: 25304418 [PubMed - in process]


Abstract

This "Brief Profile on Gender and Tobacco in South-East Asia Region" emphasizes the need for a gender-specific approach to tobacco control. It urges Member States to take measures to address gender-specific issues when developing tobacco control strategies. It also describes the situation, challenges and opportunities related to gender and tobacco use in the Region.


1.3. General population

Singh PK. Smokeless tobacco use and public health in countries of South-East Asia region. Indian J Cancer. 2014 Dec; 51 Suppl: S1-2. doi: 10.4103/0019-509X.147415.

Abstract

Effect of Tobacco Industry Interference on Smokeless Tobacco Use Among Adults Tobacco industry employs specific marketing tactics which include advertising at the point of sale, sales at discounted prices, free coupons, free samples, surrogate advertisements, and other modalities. Even though, there is some price rise in SLT products, it is less than the income growth indicating increasing affordability. The tax increase on SLT products needs to take care of inflation as well as affordability.

PMID: 25526241 [PubMed - in process]

Abstract

Smokeless tobacco (SLT) use is an understudied problem in South-East Asia. Information on SLT use among the adult population was collected from various available sources. SLT use prevalence varies among countries in the region. The prevalence of SLT use is known for all countries at national level in the region with the exception of Bhutan and DPR Korea. For Bhutan, data pertains to Thimpu only. There is no available data on SLT use for DPR Korea. Using all available data from Bhutan, India, Myanmar, Nepal, and Sri Lanka, SLT use was found to be higher among males as compared to females; however, in Bangladesh, Indonesia, and Thailand, SLT use was higher among females as compared to males. Among males, prevalence of SLT use varied from 51.4% in Myanmar to 1.1% in Thailand. Among females, the prevalence of SLT use varied from 27.9% in Bangladesh to 1.9% in Timor-Leste. The prevalence also varies in different parts of countries. For instance, the prevalence of current use of SLT in India ranges from 48.7% in Bihar to 4.5% in Himachal Pradesh. In Thailand, prevalence of current use of tobacco use varies from 0.8% in Bangkok to over 4% in the northern (4.1%) and northeastern (4.7%) region. Among all SLT products, betel quid was the most commonly used product in most countries including Bangladesh (24.3%) and Thailand (1.8%). However, Khaini (11.6%) chewing was practiced most commonly in India. Nearly 5% of the adult population used tobacco as dentifrice in Bangladesh and India. SLT is more commonly used in rural areas and among disadvantaged groups. Questions from standard "Tobacco Questions for Surveys (TQS)" need to be integrated in routine health system surveys in respective countries to obtain standardized tobacco use data at regular intervals that will help in providing trends of SLT use in countries.

PMID: 23442396 [PubMed - indexed for MEDLINE]


Abstract

The state of health of South-East Asian nations depends as much or more on extranational forces beyond their control—global warming, economic boom and bust—as it does on their own policies and practices. Nonetheless, the political systems of the region, the scope that these allow for community participation, and their attitudes to human rights, are also key determinants of health status. Governments in the region hold different attitudes to the desirability of a monopoly of effective power in government hands, and therefore vary in their commitment to concepts of community empowerment for health promotion and the involvement of non-governmental organizations. Health promotion in these nations is inextricably linked with the creation of social capital.

2. Mortality & Morbidity


Abstract

INTRODUCTION: Eighty percent of all smokers live in low and middle-income countries of the Asia Pacific region but actual estimates of the burden of disease due to smoking in the region have yet to be quantified.

METHODS: The burden of lung cancer due to smoking for all countries in the WHO Western Pacific and South East Asian regions was calculated from the population attributable fractions (PAFs). Nationally representative sex-specific prevalences of smoking were obtained from the World Health Organization, MEDLINE and/or national government documents and hazard ratios (HR) for lung cancer due to smoking in Asian and non-Asian populations were obtained from published data. The HR and prevalence were then used to calculate PAFs for lung cancer deaths due to smoking, by gender and by country.

RESULTS: The national prevalence of smoking in the Asia Pacific region ranged from 18-65% in men and from 0-50% in women. The fraction of lung cancer deaths attributable to smoking ranged from 0-40% in Asian women and from 21-49% in Asian men. In ANZ, PAFs were as high as 80% for women and 68% for men. Future estimates of the burden of smoking-related lung cancer in Asia were obtained by assuming a continuation of current smoking habits in these populations. Extrapolating the higher HR from the ANZ region to Asia, resulted in an increase in the PAFs to 4-90% in women and from 62-85% in men.

CONCLUSION: The current burden of lung-cancer due to smoking in the Asia-Pacific region is substantial accounting for up to 50% of deaths from the disease in men and up to 40% in women depending on the country.
If current smoking habits in Asia remain unchanged then the number of people dying from smoking-related lung cancer over the next couple of decades is expected to double. It is known that the majority of lung cancer is due to smoking. This is the first paper to systematically compare current burdens of lung cancer deaths due to smoking in countries in the Western Pacific and South East Asia and by gender. Findings from this paper demonstrate the number of lung cancer deaths that could be prevented if the prevalence of smoking was eliminated.


Abstract

The incidence of lung cancer is rising dramatically in Asia. Cancer is currently placed 6th to 9th in the common causes of mortality in the SAARC region. The most common cancers in Asia are the cancers of head, neck and thorax, which can be directly attributed to the smoking and tobacco chewing habits in the region especially SAARC region. The pattern of cigarette smoking changed globally during last three decades. It is slowly decreasing in developed countries, at a rate of 1% annually and rising in developing countries, at a rate of 2%. Recent studies have shown in addition to the direct tobacco smoking, environmental tobacco smoke has a proven lung carcinogenic effect. As the single most important cause for lung cancer is tobacco smoke, every effort should be taken to control this menace.

3. Tobacco control interventions (including policies, legislations and taxation)


Summary

This Regional Strategy for Tobacco Control primarily provides a longer-term strategic guidance to Member States of the South-East Asia Region to support them in formulating evidence-based policies and designing a sustained and cost-effective programme on tobacco control to counter successfully the rising public health concerns of tobacco use in the Region. The Region is home to around 250 million smokers and nearly the same number of smokeless tobacco users. About 1.3 million deaths occur every year, including around 160 000 deaths due to exposure to second-hand smoke. The increasing trend of tobacco use and its devastating effects pose a grave threat to the health and well-being of the people of the Region. Thus, the implementation of the Regional Strategy is expected to eventually protect the people of the Region from the enormous negative health, social, economic and environmental consequences of tobacco consumption and exposure to tobacco smoke.


Abstract

The tobacco epidemic is an increasing threat to public health with the tobacco burden particularly high in WHO's South-East Asia Region (SEAR). The Region has many obstacles to tobacco control, but despite these challenges, significant progress has been made in many countries. Although much work still needs to be done, SEAR countries have nevertheless implemented strong and often innovative tobacco control measures that can be classified as "best practices," with some setting global precedents. The best practice measures implemented in SEAR include bans on gilka, reducing tobacco imagery in movies, and warning about the dangers of tobacco. In a time of scarce resources, countries in SEAR and elsewhere must ensure that the most effective and cost-efficient measures are implemented. It is hoped that countries can learn from these examples and as appropriate, adapt these measures to their own specific cultural, social and political realities.

PMID: 23442393 [PubMed - indexed for MEDLINE]

Summary

This profile on the implementation of the WHO Framework Convention on Tobacco Control in the South-East Asia Region provides an overview of the status of the implementation of the convention in the eleven Member States of the SEA Region. It highlights some major milestones achieved as well as the challenges faced while implementing tobacco control measures in Member countries.


Summary

Smokeless tobacco consumption in the South-East Asia Region is a growing threat to health. The region is a hub for smokeless tobacco production and use. This category of tobacco product is manufactured in various forms. The diversity of these tobacco products, their availability and affordability make them obvious alternatives to the relatively more expensive cigarettes. However, the dangers and risks associated with smokeless tobacco are not well understood by the population. Smokeless tobacco is not perceived as an urgent threat in many of the Member countries and consequently, tobacco control efforts for this type of tobacco use are not intense. The tobacco control agenda needs to keep up the pressure and apply a wider approach and holistic strategies to address this issue. To this end, the "Expert Group Meeting on Smokeless Tobacco Control and Cessation" was convened in New Delhi, India, on 16-17 August 2011. The meeting allowed experts to share information, identify the next steps on smokeless tobacco control and cessation, and provide inputs to a policy paper to be published later. This report compiles the issues faced by Member States concerning smokeless tobacco and provides recommendations to policy-makers and stakeholders.


Abstract

The birth of the WHO Framework Convention on Tobacco Control (WHO FCTC) took place in response to the global tobacco epidemic and it became the most important global tobacco control instrument. Duly recognizing tobacco use as an important public health problem and in the wake of rising prevalence of and mortality related to tobacco use, almost all Member States of the South-East Asia Region signed and ratified the WHO FCTC. Following the ratification, Member countries have enacted comprehensive national tobacco control laws and regulations. Most countries have covered some important provisions, such as tax and price measures, smoke-free places, health warnings, a ban on tobacco advertising and promotion, and a ban on tobacco sales to minors. In spite of innumerable constraints and challenges, particularly human, infrastructural and financial resources, Member countries have been doing their best to enforce those legislations and regulations as effectively as possible. In order to educate the general public on the harmful effects of tobacco, mass health campaigns have been organized which are being continued and sustained. However, some of the important areas that need attention in due course of time are tax raises, illicit trade, tobacco industry interference and alternate cropping systems. All Member States in the Region are striving harder to achieving the goals and provisions of the Framework Convention through actively engaging all relevant sectors and addressing the tobacco issue holistically, and thus protecting the present and future generations from the devastating health, social, economic and environmental consequences of tobacco consumption and exposure to tobacco smoke.

PMID: 22089686 [PubMed - indexed for MEDLINE]

Summary

This profile on the implementation of the WHO Framework Convention on Tobacco Control in the South-East Asia Region provides an overview of the status of the implementation of the convention in the eleven Member States of the SEA Region. It highlights some major milestones achieved as well as the challenges faced while implementing tobacco control measures in Member countries.


World Health Organization, Regional Office for South-East Asia. Tobacco Cessation: A manual for nurses, health workers and other health professionals. New Delhi: WHO SEARO; 2010

Summary

Tobacco Cessation: A Manual for Nurses, Health Workers and other Health Professionals is a comprehensive manual on tobacco cessation. It provides a detailed overview of the extent and patterns of use of tobacco products in the South-East Asia (SEA) Region and the related health burden. Among the top 10 countries globally with the highest levels of tobacco use among males, as many as three are from the SEA Region. The Manual highlights the need to provide tobacco cessation interventions by nurses, health workers and other health professionals, and graphically depicts the adverse health effects of tobacco on almost all organs of the human body. In the section on interventions, the Manual reiterates that tobacco cessation efforts start with the successful identification of tobacco use. It provides effective tools and techniques for tobacco cessation interventions, including visits and follow-up of patients, listing of pros and cons, worksheets, group-based interventions and pharmacotherapy. Apart from the usual methods of cessation such as tapering off and abrupt cessation (‘cold turkey’), the Manual also lists new and innovative interventions such as the ‘Recovery Calendar’. Above all, the Manual highlights the importance of recognizing the dangerous effects of tobacco use, the benefits of quitting and the need to provide effective follow-up to prevent ‘lapse’ and ‘relapse’. It includes a series of succinct, ready-to-use methods, counselling techniques and model motivational tools that can be practised by the health professional to promote tobacco cessation.


Summary

Helping People Quit Tobacco: A Manual for Doctors and Dentists is a comprehensive dossier on tobacco cessation with the help of intervention from doctors and dentists. The document begins with the premise that the core responsibility of any doctor or dentist includes reducing the use of tobacco among his patients and in the community, and encouraging tobacco cessation. The importance of the TEACH tool to meet the MPOWER goals of the World Health Organization are also enunciated. The Manual cites relevant statistics from the apex global tobacco surveys to highlight the extent and enormity of the tobacco epidemic in the South-East Asia Region, and also outlines the nature of harm caused by tobacco use, its inherent links with several debilitating diseases and the manifold risks of using smoking and smokeless tobacco products. The Manual encourages doctors and dentists to identify at the earliest possible stage tobacco use in a patient, and provides step-by-step guidelines on intervention and assisted cessation through counselling, motivational tools and medication or pharmacotherapy. A concluding section provides details on ‘lapse’ and ‘relapse’ and how to overcome the same.


Summary

Reducing the use of tobacco is a complex task as it involves enormous socio-cultural and health dimensions. It requires a multi-sectoral and integrated approach that includes consistent and continuous communication for behavioural and social change. Communication as such, is a strategic process to influence individual and group
behaviour that needs systematic planning and implementation. This document tends to define the framework and the key elements of communication for tobacco control to be used in the Member States of the South-East Asia Region. It focuses on the major approaches of communication and guiding principles for planning and using the communication components for designing the effective communication for tobacco control programme. It suggests a model for communication planning based on communication objectives, target groups and potential barriers which determines the communication approach, message development and selection of media. It emphasizes on the importance of using media mix, partnership, capacity building and regular evaluation of communication activities.


Summary

Since 2007 the Bloomberg Global Initiative to Reduce Tobacco Use (BGI) is being implemented in the South-East Asia Region. Four countries from the Region - Bangladesh, India, Indonesia and Thailand - were selected as priority countries under the Initiative. In 2007 both human and financial support was provided to these countries to strengthen their capacity for tobacco control. The WHO South-East Asia Region was the first and only Region to have organized an orientation workshop for all BGI staff. The workshop was found to be useful for the implementation of the Initiative in the Region. It has also enhanced the knowledge and team spirit of the whole BGI team and provided a unique opportunity to discuss and share the challenges that the Initiative is facing in terms of coordination for effective implementation. The workshop provided the platform to discuss and decide on a common approach to take the Initiative to its logical fruition.


Summary

Smoking and exposure to second-hand smoke (SHS) are major contributors to the chronic disease burden in the South-East Asia Region. Due to weak tobacco control measures, especially inadequate measures in the area of SHS, a very large population in the Region is exposed to SHS. The regional profile on Smoke-free Environments depicts the situation with respect to exposure to SHS in the Region. It also describes briefly the existing measures in the Region for protecting people from SHS exposure. Making environments completely smoke-free is the most effective way to protect the population from exposure to SHS everywhere, including public places and workplaces. This can only be done by developing and strengthening smoke-free policies and legislation, and enforcing the same.


Summary

This Manual is designed for teachers who work with 13-15-year-old students in Member countries of the World Health Organization (WHO)'s South-East Asia (SEA) Region. The Manual uses skill-based health education through curricular and co-curricular activities. Skill-based health education is designed to help students acquire the knowledge, attitude and skills that are needed to make informed choices and decisions, understand the consequences of tobacco use and tobacco advertising, adopt and practise healthy behaviours to avoid risks and create conditions that are conducive to health. This approach also empowers students to contribute to the creation of tobacco-free environment in which they learn and live. The Manual provides young people with an opportunity to participate in an environmental approach to tobacco control. The decision that young people make about tobacco use are heavily influenced by the physical, social, economic and legal environments in which they live. The activities in the Manual represent a departure from the traditional approach of simply educating students not to use tobacco, which is often considered an ineffective strategy. The progressive vision helps young people move beyond a reliance on awareness education to embrace a comprehensive and science-based approach. The focus in the Manual is on what young people can do to create tobacco-free norms and environments and to thwart manipulative efforts of the tobacco industry to create tobacco addictions. The Manual includes classroom activities which a school can adopt either in the form of a regular or optional curriculum. It uses a series of...
activities which can be carried out as interactive/participatory activities in classrooms (curricular), or as field
activities in the community (co-curricular activities). A participatory approach gives students the opportunity to
observe and actively practice skills, thus being engaged in “learning by doing.” In order to make these activities
interactive, the class is split into small working groups and discussions are held in bigger groups based on inputs
from the smaller groups. Schools that would use this Manual may adopt a similar pattern or can modify it
according to their situations and needs. Teaching posters, handouts, worksheets, and answer sheets, are
provided in this Manual to be used in any combination by the teacher or simply as a guide for teaching.
Additionally, clippings from newspapers, a few sets of graph paper, pencils, a black board, and chalk may be
used as supplementary materials by the teacher.

World Health Organisation, Regional Office for South–East Asia. Regional plan of action for tobacco control.

Summary

As part of the General Obligations under Article 5 of the WHO Framework Convention on Tobacco Control
(FCTC), each Party shall develop, implement and periodically update and review multisectoral national tobacco
control strategies, plans of action and programmes in order to fully comply with the provisions of the Convention.
In order to provide some general guidelines on how to develop these strategies and plans of action, the Regional
Strategy for Tobacco Control and Regional Plan of Action for Tobacco Control were developed by the Regional
Office. The Regional Strategy contains the vision and strategic plan for tobacco control in the WHO South-East
Asia Region for the next five years (2006-2010). The Plan of Action was based on the Regional Strategy for
Tobacco Control (2006-2010). While the Convention provides guidelines to reduce the harm from tobacco,
definitive actions to control tobacco have to take place at the country level. The successful implementation of the
FCTC provisions depends almost entirely on the ability of the countries. Some countries in the Region have
already developed their national strategies and plans of action and others are in the process of doing so. These
two documents would be helpful in revising the existing national strategies and plans of action in countries that
have already developed the same to make them fully compatible with the WHO FCTC. The documents would
also be helpful developing national strategies and plans of action by countries which have not yet done so.

World Health Organization, Regional Office for South-east Asia. Regional Strategy for tobacco control. New

Summary

As part of the General Obligations under Article 5 of the WHO Framework Convention on Tobacco Control
(FCTC), each Party shall develop, implement and periodically update and review multisectoral national tobacco
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World Health Organisation, Regional Office for South–East Asia. WHO framework convention on tobacco

Samarasinghe D, Goonaratna C. Tobacco related harm in South Asia: High mortality but some promising

Abstract

This report summarizes the health consequences and costs associated with tobacco use. It reviews price trends for tobacco products in Bangladesh, India, Indonesia, Nepal, Thailand and Sri Lanka. It reports trends in government tobacco tax revenues and how tobacco products are currently taxed in these countries, and in Maldives and Myanmar. The third section examines the demand for tobacco products in south-east Asian countries. A literature review on the demand for tobacco products in developing countries is followed by new analysis using time series and household-level data. The revenue-generating potential of tobacco taxes in south-east Asian countries is discussed. Finally, the report discusses contraband trade in tobacco products in South-East Asia, with emphasis on the industry's alleged role in smuggling.

4. Tobacco economics including Interference of tobacco industry


Summary:

Over the past 20 years, with the liberalization of international trade, trade in tobacco and tobacco products has rapidly expanded. This has led to a corresponding rise in tobacco consumption across low- and middle-income countries since the 1980s, and poses a major threat to global public health. This phenomenon highlights the inevitable connection between international trade agreements and the tobacco control policies enshrined in the WHO Framework Convention on Tobacco Control (FCTC). An Expert Intercountry Consultation on Tobacco and Trade was held at the WHO Regional Office for South-East Asia, New Delhi on 3-4 October 2012. A total of 31 participants from the ministries of health, trade and, agriculture and legal offices from nine Member States as well as WHO staff from WHO country offices in Bangladesh, India, Indonesia, Myanmar and Nepal attended. Recommendations for the Member States were: (1) establishing and strengthening coordination between the ministries of health and trade on policies and regulations on trade and investment relating to tobacco and tobacco products; (2) promoting advocacy on health perspectives of international and investment agreements; (3) strengthening full implementation of the WHO FCTC; (4) mobilizing more funds for tobacco control in the Member States; (5) ensuring law enforcement and public compliance; and (6) conducting research on health cost studies and alternative livelihood for tobacco farmers. It was recommended that WHO should strengthen the capacities of Member States on health perspectives of international trade and investment agreements.

Summary

There is a fundamental and irreconcilable conflict between the interests of the tobacco industry and public health policy. On the one hand, the tobacco industry produces and promotes a product that has been scientifically proven to be highly addictive and harmful, and which exacerbates social ills, including poverty. On the other hand, governments and the public health sector try to improve the health of the population by implementing measures to reduce tobacco use. As the countries work towards developing and enforcing tobacco control measures, interference by the tobacco industry to counter these measures increases. The growing, manufacturing, distribution and selling components of the tobacco industry get involved in such interference through different means. Article 5.3 of the WHO Framework Convention on Tobacco Control and its Guidelines recommend how such interference should be addressed. Nineteen delegates from different sectors of 10 countries of the WHO South-East Asia Region attended a regional meeting on countering tobacco industry interference, from 19-21 March 2013, at the WHO Regional Office for South-East Asia, New Delhi, to analyse this issue and formulate strategies to address it. The recommendations for the Member States were to: (1) review and revise as needed, the terms of reference of the national tobacco control focal points; (2) formulate and implement, within one year, a communication strategy to raise awareness among various government and nongovernment stakeholders about tobacco industry interference and measures to counter it; (3) develop and implement a sustainable and systematic national and regional monitoring mechanism to ensure that information related to the tobacco industry is current and accurate; (4) review, and where not available, formulate a code of conduct for national officials that provides guidance on how to prevent conflicts of interest, real or perceived, between the civil service, elected officials and other national officials and the tobacco industry interests; and (5) review, and where not available, formulate rules for interaction between government and the tobacco industry, based on Guidelines for Article 5.3 of the WHO Framework Convention on Tobacco Control.


Abstract

This paper examines the social, cultural, economic and legal dimensions of tobacco control in the South-East Asia Region in a holistic view through the review of findings from various studies on prevalence, tobacco economics, poverty alleviation, women and tobacco and tobacco control laws and regulations. Methods were Literature review of peer reviewed publications, country reports, WHO publications, and reports of national and international meetings on tobacco and findings from national level surveys and studies. Tobacco use has been a social and cultural part of the people of South-East Asia Region. Survey findings show that 30% to 60% of men and 1.8% to 15.6% of women in the Region use one or the other forms of tobacco products. The complex nature of tobacco use with both smoking and smokeless forms is a major challenge for implementing tobacco control measures. Prevalence of tobacco use is high among the poor and the illiterate. It is higher among males than females but studies show a rising trend among girls and women due to intensive marketing of tobacco products by the tobacco industry. Tobacco users spend a huge percent of their income on tobacco which deprives them and their families of proper nutrition, good education and health care. Some studies of the Region show that cost of treatment of diseases attributable to tobacco use was more than double the revenue that governments received from tobacco taxation. Another challenge the Region faces is the application of uniform tax to all forms of tobacco, which will reduce not only the availability of tobacco products in the market but also control people switching over to cheaper tobacco products. Ten out of eleven countries are Parties to the WHO Framework Convention on Tobacco Control and nine countries have tobacco control legislation. Enforcement of control measures is weak, particularly in areas such as smoke-free environments, advertisement at the point of sale and sale of tobacco to minors. Socio-cultural acceptance of tobacco use is still a major challenge in tobacco control efforts for the governments and stakeholders in the South-East Asia Region. The myth that chewing tobacco is less harmful than smoking tobacco needs to be addressed with public awareness campaigns. Advocacy on the integration of tobacco control with poverty alleviation campaigns and development programs is urgently required. Law enforcement is a critical area to be strengthened and supported by WHO and the civil society organizations working in the area of tobacco control.

PMID: 22089683 [PubMed - indexed for MEDLINE]


**Summary**

This strategy sets out the objectives and priority activities for resource mobilization for 2010-2011 to ensure effective implementation of the Strategic Action Plan for Tobacco Control in South-East Asia Region. It provides strategic approaches and guidance on the major steps for resource mobilization highlighting the process of assessment for resource requirement and the potential for raising it; analysis of donor intelligence, building alliance and carrying out advocacy. It emphasizes on the need to diversify funding sources for sustainable financing to the programme and also on the importance of realistic programme development and management of resources.

World Health Organization, Regional Office for South- East Asia. **Implications of the agreement on South Asia free trade area on tobacco trade and public health in the SAARC region.** New Delhi: WHO SEARO; 2008.

**Summary**

Trade liberalization programme has become operational through the introduction of the South Asian Free Trade Area (SAFTA) among South Asian nations. The agreement includes tobacco and tobacco products under the "Sensitive List". This document lists ways in which trade in tobacco products can be managed under SAFTA in the context of the WHO Framework Convention on Tobacco Control.


**Abstract**

This paper summarizes briefly the general economic situation in the Maldives and describes its health care system, demographics and health outcomes. Mortality and life expectancy have been improving, but cardiovascular and respiratory diseases and cancers are the top causes of death; smoking is a risk factor for all of them. Tobacco imports have been increasing, although changes in the import duty appears to have caused a significant decrease in 2000. Cigarettes account for most of the tobacco product imports and are smoked by 40 percent of all tobacco product users. Chewing tobacco is also commonly used, by 30 percent of tobacco users. Overall, tobacco use prevalence is high by international standards: in 1997, 57 percent of men and 29 percent of women used some form of tobacco. Prevalence is higher among island communities than in the capital. Prices of cigarettes have been fairly stable, with some price rises from 2000. Government revenues from tobacco import duties have risen, but are less than 2 percent of total import duty revenues. Policy recommendations are to ensure regular real price increases in all tobacco products to deter use, accompanied by actions to detect and deter smuggling, better surveillance and monitoring of tobacco use, improvements in the system of reporting cause of death, and more cessation support to raise quit rates.
1. Tobacco use Surveillance (surveys and reports)

1.1. Youth in general


Abstract

Health-risk behaviors among young adults are a serious public health problem. This cross-sectional study aimed to estimate the prevalence of single and concurrent multiple health-risk behaviors: smoking tobacco, consuming alcohol, and chewing betel quid among young adult Myanmar laborers in Mae Sot District, Tak Province, Thailand. Three hundred Myanmar laborers, aged 18-24 years, were interviewed using a structured questionnaire. About 33.6% reported no risk behaviors, 24.7% had one, and 41.7% had two or three risk behaviors. Multinomial logistic regression analysis showed six variables were significantly associated with health-risk behaviors: male gender, high/moderate custom/traditional influences, friends who smoked/consumed alcohol/chewed betel quid, and exposure to betel-quid chewing by other family members.

PMID:25507612[PubMed - in process]

1.1.1. Global Youth Tobacco Survey


Abstract

BACKGROUND: At least two rounds of the Global Youth Tobacco Survey (GYTS) have been completed in most of the countries in the World Health Organization South-East Asia region. Comparing findings from these two rounds provides trend data on smokeless tobacco (SLT) use for the first time.

METHODS: This study uses GYTS data from Bangladesh, Bhutan, India, Indonesia, Maldives, Myanmar, Nepal, Sri Lanka, Thailand, and Timor-Leste during 2006-2013. GYTS is a nationally representative survey of 13-15-year-old students using a consistent and standard protocol. Current SLT use is defined as using any kind of SLT products, such as chewing betel quid or non betel quid or sniffing any other products orally or through the nasal route, during the 30 days preceding the survey. Prevalence and 95% confidence intervals were computed using SAS/SUDAAN software.

RESULTS: According to most recent GYTS data available in each country, the prevalence of current use of SLT among youth varied from 5.7% in Thailand to 23.2% in Bhutan; among boys, from 7.1% in Bangladesh to 27.2% in Bhutan; and among girls, from 3.7% in Bangladesh to 19.8% in Bhutan. Prevalence of SLT was reported significantly higher among boys than girls in Bhutan (boys 27.2%; girls 19.8%), India (boys 11.1%; girls 6.0%), Maldives (boys 9.2%; girls 2.9%), Myanmar (boys 15.2%; girls 4.0%), and Sri Lanka (boys 13.0%; girls 4.1%). Prevalence of current SLT use increased in Bhutan from 9.4% in 2009 to 23.2% in 2013, and in Nepal from 6.1% in 2007 to 16.2% in 2011.

CONCLUSION: The findings call for countries to implement corrective measures through strengthened policy and enforcement.

PMID: 25526249 [PubMed - in process]

Abstract

BACKGROUND: The Association of Southeast Asian Nations (ASEAN) has made tobacco use prevention a primary health issue. All ASEAN countries except Indonesia have ratified the World Health Organization Framework Convention on Tobacco Control (WHO FCTC), the world's first public health treaty on tobacco control.

METHODS: Global Youth Tobacco Survey (GYTS) data were collected from representative samples of students in school grades associated with ages 13-15 in Cambodia, Indonesia, Laos (Vientiane), Malaysia, Myanmar, Philippines, Singapore, Thailand and Vietnam (Hanoi).

RESULTS: Current cigarette smoking ranged from less than 5% (Vietnam and Cambodia) to 20.2% in Malaysia. Current use of tobacco products other than cigarettes was less than 10% in all countries. Boys were significantly more likely than girls to smoke cigarettes or use other tobacco products. Exposure to second-hand smoke in public places was greater than 50%, direct pro-tobacco advertising exposure was greater than 75% and over 10% of students were exposed to indirect advertising. Over 60% of students who currently smoked cigarettes wanted to stop, but 80% who tried to quit in the year prior to the survey failed.

CONCLUSIONS: Efforts to reduce the current and projected harm caused by tobacco use in the ASEAN countries are urgently needed. ASEAN countries need to expand their national comprehensive tobacco prevention and control programs and enforce those laws already passed. Without this effort little reduction can be expected in the burden of chronic diseases and tobacco-related mortality.

PMID: 18669557 [PubMed - indexed for MEDLINE]

1.1.2. Global Adult Tobacco Surveys

Not available

1.2. Health professionals (including medical and dental students)


Abstract

BACKGROUND: The Medical and Dental Global Health Professions Student Surveys (GHPSS) are surveys based in schools that collect self-administered data from students on the prevalence of tobacco use, exposure to second-hand smoke, and tobacco cessation training, among the third-year medical and dental students.

MATERIALS AND METHODS: Two rounds of medical and dental GHPSS have been conducted in Bangladesh, India, Myanmar, Nepal, Sri Lanka, and Thailand, among the third-year medical and dental students, between 2005 and 2006 and 2009 and 2011.

RESULTS: The prevalence of any tobacco use among third-year male and female medical students did not change in Bangladesh, India, and Nepal between 2005 and 2006 and 2009 and 2011; however, it reduced significantly among females in Myanmar (3.3% in 2006 to 1.8% in 2009) and in Sri Lanka (2.5% in 2006 to 0.6% in 2011). The prevalence of any tobacco use among third-year male dental students did not change in Bangladesh, India, Nepal, and Thailand between 2005 and 2006 and 2009 and 2011; however, in Myanmar, the prevalence increased significantly (35.6% in 2006 to 49.5% in 2009). Among the third-year female students, a significant increase in prevalence was noticed in Bangladesh (4.0% in 2005 to 22.2% in 2009) and Thailand (0.7% in 2006 to 2.1% in 2011). It remained unchanged in the other three countries. Prevalence of exposure to second-hand smoke (SHS) both at home and in public places, among medical students, decreased significantly in Myanmar and Sri Lanka between 2006 and 2009 and in 2011. Among dental students, the prevalence of SHS exposure at home remained in Bangladesh, India, and Myanmar, and in public places in India. However, there was an increase of SHS exposure among dental students in Nepal, both at home and in public places, between 2005 and 2011. Medical students in Myanmar, Nepal, and Sri Lanka reported a declining trend in schools, with a smoking ban policy in place, between 2005 and 2006 and 2009 and 2011, while proportions of dental students reported that schools with a smoking ban policy have increased significantly in Bangladesh and
Myanmar. Ever receiving cessation training increased significantly among medical students in Sri Lanka only, whereas, among dental students, it increased in India, Nepal, and Thailand.

CONCLUSION: Trends of tobacco use and exposure to SHS among medical and dental students in most countries of the South-East Asia Region had changed only relatively between the two rounds of GHPSS (2005-2006 and 2009-2011). No significant improvement was observed in the trend in schools with a policy banning smoking in school buildings and clinics. Almost all countries in the SEA Region that participated in GHPSS showed no significant change in ever having received formal training on tobacco cessation among medical and dental students.

PMID: 23442402 [PubMed - indexed for MEDLINE]


Abstract

We conducted a cross-sectional study of the risk behaviours inherent in tobacco smoking, alcohol consumption and premarital sex, among 400 medical students (186 males) from a medical university, Yangon, and 410 community youths (244 males) 15 to 24 years of age from selected townships in Myanmar. As a result, we found that 12.8% smoked, 34.5% consumed alcohol and 10.1% engaged in premarital sex, among medical students, whereas among community youths, the corresponding rates were 28.8%, 32.1% and 11.9%. There was a significant difference in the prevalence of all risk behaviours between male and female respondents. Such risk behaviours were more dominant among males, while being very low among females. Among male respondents, the smoking rate was significantly higher among community youths (46.7%) than among medical students (26.9%); however, student alcohol consumption (58.5%) was greater than that of community youths (47.1%). Premarital sexual experience did not differ significantly between the two groups. These risk behaviours were correlated with one another. Having close friends who engaged in similar behaviours was found to be the major contributing factor for those kinds of risk among both groups. Our results highlighted the fact that, despite their relatively sophisticated knowledge of risks, the prevalence of risky behaviour among the medical students was no less frequent than among community youths. To diminish those risks, evaluations of actual conditions, behaviour modifications and specific preventive measures compatible with existing culture and changing lifestyles should be undertaken. Effective adolescent health programs at schools, colleges and universities should be revised and emphasized.

PMID:20229705[PubMed - indexed for MEDLINE]

1.2.1. Global Health Professions Students Survey (GHPSS)


Abstract

BACKGROUND: GHPSS is a school-based survey that collects self-administered data from students in regular classroom settings. GHPSS produces representative data at the national or city level in each country. This study aims to investigate the prevalence of tobacco use, exposure to secondhand smoke, and cessation counseling among medical students using the GHPSS data.

METHODS: The Global Health Professions Student Survey (GHPSS) was conducted among 3rd year medical students in 47 countries (including Myanmar) and the Gaza Strip/West Bank from 2005-2008 to determine the prevalence of tobacco use and amount of formal training in cessation counseling.

RESULTS: In 26 of the 48 sites, over 20% of the students currently smoked cigarettes, with males having higher rates than females in 37 sites. Over 70% of students reported having been exposed to secondhand smoke in public places in 29 of 48 sites. The majority of students recognized that they are role models in society (over 80% in 42 of 48 sites), believed they should receive training on counseling patients to quit using tobacco (over 80% in 41 of 48 sites), but few reported receiving formal training (less than 40% in 46 of 48 sites).
CONCLUSION: Tobacco control efforts must discourage tobacco use among health professionals, promote smoke free workplaces, and implement programs that train medical students in effective cessation-counseling techniques.

PMID: 21284864[PubMed - indexed for MEDLINE] PMCID: PMC3042391


1.3. Educational professionals and other professionals

1.3.1. Global School Personnel Survey (GSPS)


1.4. Women


Abstract

Eight manuscripts have specifically examined the effects of areca (betel) nut use in pregnant women, seven of which have documented adverse effects on birth weight, newborn neurological status, gender ratio and pregnancy outcomes such as anaemia and miscarriage following areca nut use during pregnancy. A retrospective cohort analysis of migrant and refugee pregnant women attending antenatal clinics along the Thai-Myanmar border (July 1997 to November 2006) was conducted to examine the adverse effects of areca nut use routinely recorded on enrolment. Of 7685 women, 2284 (29.7%) never used areca or smoked (cheroots), 2484 (32.3%) only used areca, 438 (5.7%) only smoked cheroots and 2479 (32.3%) used both areca and cheroots. Pieces of ripe areca nut in a leaf with lime, without tobacco, were used particularly among older multigravid women. Adverse pregnancy effects were not observed in areca nut users compared with non-users. Smoking, but not areca nut use, had a dose-related effect on miscarriage. Areca nut use in conjunction with smoking reduced the adverse effects of smoking on birth weight, further supporting a lack of effect of areca nut. Areca (betel) nut-related adverse pregnancy outcomes were not observed in this population, whereas smoking was clearly harmful. Differences from previous reports may result from the amount or types of areca nut, or quid content, consumed between countries. Smoking, but not areca nut, reduction is likely to improve pregnancy outcomes on the Thai-Myanmar border.

PMID:24029401[PubMed] PMCID:PMC3442179


Abstract

This "Brief Profile on Gender and Tobacco in South-East Asia Region" emphasizes the need for a gender-specific approach to tobacco control. It urges Member States to take measures to address gender-specific issues when developing tobacco control strategies. It also describes the situation, challenges and opportunities related to gender and tobacco use in the Region.


1.5. General population

Abstract

Smokeless tobacco (SLT) use in various forms is highly prevalent in Myanmar. The aim of this paper is to study the socio-cultural background of SLT use and products of SLT in Myanmar and the prevalence of SLT based on surveys and from other published data bases. Information was obtained from the literature review and through search on PubMed and Google. The use of SLT is deep rooted in Myanmar culture, and there is also widespread belief that it is not as dangerous as smoking. SLT use is growing in Myanmar. About 9.8% of the 13-15-year-old school children and 20.8% adults use SLT; it is many-fold higher among men. The use of SLT is prevalent using many different types of tobacco and forms of its use in Myanmar. The socio-cultural acceptance and the myths were compounded by the lack of specific SLT control component in the National Tobacco Control Legislation adopted needs to be addressed as a priority through intensified community awareness programs, public education programs, and advocacy campaigns. Effective enforcement of the law and amendment to include specific components of SLT in the provisions of the law is highly recommended. The prevalence of SLT is high among school children and adults (especially in men) in Myanmar. Betel quid and tobacco is a common form of SLT use. Although control of smoking and consumption of tobacco product law exists, its implementation is weak.

PMID:23442397[PubMed - indexed for MEDLINE]


Abstract

BACKGROUND: Second-hand smoke (SHS) is a threat to people's health particularly in South-East Region including Myanmar.

AIM: To describe the exposure to SHS among the adult population of Myanmar.

MATERIALS AND METHODS: The analysis was done based on the data relating to SHS exposure from 2009 Noncommunicable Risk Factor Survey conducted in Myanmar. A total of 7,429 respondents aged 15-64 from a nationally representative household-based cross-sectional multi-stage probability sample were used. Gender-specific estimates of the proportion of adults exposed to SHS were examined across various socio-demographic characteristics.

RESULTS: The exposure to SHS was 55.6% (52% among males and 57.8% among females) at home, 63.6% (71.9% among males and 54.7% among females) in indoor places and 23.3% (38.8% among males and 13.6% among females) in public places. SHS exposure at home was more common among females. However, males were more likely to be exposed at work and public places than females. SHS exposure at home and public places decreased with age in both sexes. In these settings, SHS exposure was related to education, residence, employment status, marital status, and income level. At workplaces, it was mainly related to educational attainment and occupational status.

CONCLUSION: Exposure was significantly high in settings having partial ban as compared with settings having a complete ban. The solution is simple and straightforward, smoke-free environments. The findings emphasize the need for continuing efforts to decrease the exposure and to increase the knowledge of its harmful effects.

PMID: 23442406 [PubMed - indexed for MEDLINE]


Summary

Noncommunicable Disease Risk Factor Survey, Myanmar 2009 contains data and information on the risk factors for noncommunicable diseases (NCDs) in Myanmar collected through a nationally representative survey in 2009. The survey results presented in this document are internationally comparable and can be used for raising awareness about the major NCD risk factors and developing specific interventions in the country.
Abstract

The state of health of South-East Asian nations depends as much or more on extranational forces beyond their control—global warming, economic boom and bust—as it does on their own policies and practices. Nonetheless, the political systems of the region, the scope that these allow for community participation, and their attitudes to human rights, are also key determinants of health status. Governments in the region hold different attitudes to the desirability of a monopoly of effective power in government hands, and therefore vary in their commitment to concepts of community empowerment for health promotion and the involvement of non-governmental organizations. Health promotion in these nations is inextricably linked with the creation of social capital.

2. Tobacco related Mortality & Morbidity


Abstract

Myanmar Tobacco Control Law of 2006 covers the control of all forms of tobacco use. After 7-year, tobacco use among adults did not see a decrease. The paper aimed to study the prevalence, details of the products, trade, legislation, tax, marketing, advertising and evidence on morbidity and mortality, and to make recommendations for policy options. Personal communications by authors and colleagues, and searches by keywords in PubMed and on Google, literature review and research from published reports, and various studies and surveys conducted in Myanmar and other countries. Smokeless tobacco use in Myanmar is the highest among ASEAN countries. A variety of SLT products used together with betel chewing poses a challenge; betel quid chewing has been accepted as a cultural norm in both rural and urban areas. Betel quid chewing usually starts at younger ages. Sale, marketing, and advertising of SLT are not under control and thus, road-side kiosks selling betel quid with SLT are mushrooming. Considerable trade of SLT products by illegal and legal means created an increase in access and availability. Low cost of SLT product enables high volume of use, even for the poor families. Taxation for raw tobacco and tobacco products is half the values of the tax for cigarettes. Effective enforcement, amendment of the law, and action for social change are needed.

2.1. Cancers related to tobacco use

2.1.1. Head and Neck cancers


Abstract

The occurrence of oral cancer is not clearly known in Myanmar, where betel quid chewing habits are widely spread. Since betel quid chewing has been considered to be one of the important causative factors for oral cancer, the circumstantial situation for oral cancer should be investigated in this country. We surveyed oral cancer cases as well as whole body cancers from two cancer registries from Yangon and Mandalay cities, both of which have representative referral hospitals in Myanmar, and we showed that oral cancer stood at the 6th position in males and 10th in females, contributing to 3.5% of whole body cancers. There was a male predominance with a ratio of 2.1:1. Their most frequent site was the tongue, followed by the palate, which was different from that in other countries with betel quid chewing habits. About 90% of male and 44% of female patients had habitual backgrounds of chewing and smoking for more than 15 years. The results revealed for the first time reliable oral cancer morbidity frequencies in Myanmar, suggesting that longstanding chewing and smoking habits are etiological backgrounds for oral cancer patients.
Abstract

Cancer in Myanmar is one of the 10 leading causes of morbidity and mortality. In 1974, the Yangon Cancer Registry was established. From 1974 to 2001 a total of 85,298 cancer cases were registered. From 1963 to 1972 the average annual incidence rate of oral cancer was calculated to be 363 per 100,000 population. The tongue was mostly affected (31.2%). In one study, the prevalence of oral leukoplakia was 1.7%, erythroplakia 0.1%, and submucous fibrosis 0.1%. No epidemiologic studies of the prevalence of betel quid chewing (BQC) in Myanmar have been performed. One study showed that among 77,313 individuals over the age of 6 years, 46.4% were habitual smokers. A recent symposium on oral health stressed the necessity to introduce concepts of prevention, focusing on BQC habits and smoking as high-risk factors for oral cancer and pre-cancer in Myanmar.

PMID: 16519764 [PubMed - indexed for MEDLINE]

2.1.2. Thoracic cancers


Abstract

INTRODUCTION: Eighty percent of all smokers live in low and middle-income countries of the Asia Pacific region but actual estimates of the burden of disease due to smoking in the region have yet to be quantified.

METHODS: The burden of lung cancer due to smoking for all countries in the WHO Western Pacific and South-East Asian regions was calculated from the population attributable fractions (PAFs). Nationally representative sex-specific prevalences of smoking were obtained from the World Health Organization, MEDLINE and/or national government documents and hazard ratios (HR) for lung cancer due to smoking in Asian and non-Asian populations were obtained from published data. The HR and prevalence were then used to calculate PAFs for lung cancer deaths due to smoking, by gender and by country.

RESULTS: The national prevalence of smoking in the Asia Pacific region ranged from 18-65% in men and from 0-50% in women. The fraction of lung cancer deaths attributable to smoking ranged from 0-40% in Asian women and 21-49% in Asian men. In ANZ, PAFs were as high as 80% for women and 68% for men. Future estimates of the burden of smoking-related lung cancer in Asia were obtained by assuming a continuation of current smoking habits in these populations. By extrapolating the higher HR from the ANZ region to Asia, resulted in an increase in the PAFs to 4-90% in women and from 62-85% in men.

CONCLUSION: The current burden of lung-cancer due to smoking in the Asia-Pacific region is substantial accounting for up to 50% of deaths from the disease in men and up to 40% in women depending on the country. If current smoking habits in Asia remain unchanged then the number of people dying from smoking-related lung cancer over the next couple of decades is expected to double. It is known that the majority of lung cancer is due to smoking. This is the first paper to systematically compare current burdens of lung cancer deaths due to smoking in countries in the Western Pacific and South East Asia and by gender. Findings from this paper demonstrate the number of lung cancer deaths that could be prevented if the prevalence of smoking was eliminated.

PMID: 20593933 [PubMed - indexed for MEDLINE]

2.1.3. Cardiovascular diseases


Abstract

BACKGROUND: Tobacco will soon be the biggest cause of death worldwide, with the greatest burden being borne by low and middle-income countries where 8/10 smokers now live.

OBJECTIVE: This study aimed to quantify the direct burden of smoking for cardiovascular diseases (CVD) by calculating the population attributable fractions (PAF) for fatal ischaemic heart disease (IHD) and stroke (haemorrhagic and ischaemic) for all 38 countries in the World Health Organization Western Pacific and South East Asian regions.
DESIGN AND SUBJECTS: Sex-specific prevalence of smoking was obtained from existing data. Estimates of the hazard ratio (HR) for IHD and stroke with smoking as an independent risk factor were obtained from the approximately 600,000 adult subjects in the Asia Pacific Cohort Studies Collaboration (APCSC). HR estimates and prevalence were then used to calculate sex-specific PAF for IHD and stroke by country.

RESULTS: The prevalence of smoking in the 33 countries, for which relevant data could be obtained, ranged from 28-82% in males and from 1-65% in females. The fraction of IHD attributable to smoking ranged from 13-33% in males and from <1-28% in females. The percentage of haemorrhagic stroke attributable to smoking ranged from 4-12% in males and from <1-9% in females. Corresponding figures for ischaemic stroke were 11-27% in males and <1-22% in females.

CONCLUSIONS: Up to 30% of some cardiovascular fatalities can be attributed to smoking. This is likely an underestimate of the current burden of smoking on CVD, given that the smoking epidemic has developed further since many of the studies were conducted. PMID: 16728748 [PubMed - indexed for MEDLINE] PMCID: PMC2564655

2.1.4. Diabetes


Abstract

The aims of this study were to obtain the most recent representative data for the prevalence of diabetes in adult populations in the World Health Organisation's South-East Asia and Western Pacific regions and to quantify the contribution of diabetes to the burden of mortality from cardiovascular diseases in these regions. Previous reports indicate that there are 83 million individuals with diabetes in the Asia-Pacific region, but since many of the country-specific estimates were not from nationally representative studies, this figure may not accurately reflect the current burden of diabetes. Information on the prevalence of diabetes was obtained by searching Medline and government health websites. Data were available from 12 countries representing 78% of the total population of the Asia-Pacific region. Six of 10 countries with complete data reported a prevalence of diabetes exceeding those estimates currently cited by the World Health Organization; three of which have also already exceeded the World Health Organization projections for 2030. In the 12 countries in the region with nationally representative data, the prevalence of diabetes ranged from 2.6% to 15.1%. Hazard ratios from the Asia Pacific Cohort Studies Collaboration were used to calculate population attributable fractions for diabetes for fatal cardiovascular diseases in the region. Population attributable fractions ranged from 2% to 12% for coronary heart disease, 1% to 6% for haemorrhagic stroke, and 2% to 11% for ischaemic stroke. Accurate estimates of the prevalence of diabetes are of great importance and standard methods are needed for periodic surveillance across the Asia-Pacific region and elsewhere.

PMID: 17215197 [PubMed - indexed for MEDLINE]

3. Tobacco control interventions (including policies, legislations and taxation)


Abstract

The tobacco epidemic is an increasing threat to public health with the tobacco burden particularly high in WHO's South-East Asia Region (SEAR). The Region has many obstacles to tobacco control, but despite these challenges, significant progress has been made in many countries. Although much work still needs to be done, SEAR countries have nevertheless implemented strong and often innovative tobacco control measures that can be classified as "best practices," with some setting global precedents. The best practice measures implemented in SEAR include bans on gutka, reducing tobacco imagery in movies, and warning about the dangers of tobacco. In a time of scarce resources, countries in SEAR and elsewhere must ensure that the most effective and cost-efficient measures are implemented. It is hoped that countries can learn from these examples and as appropriate, adapt these measures to their own specific cultural, social and political realities.

PMID: 23442393 [PubMed - indexed for MEDLINE]

Summary

This Regional Strategy for Tobacco Control primarily provides a longer-term strategic guidance to Member States of the South-East Asia Region to support them in formulating evidence-based policies and designing a sustained and cost-effective programme on tobacco control to counter successfully the rising public health concerns of tobacco use in the Region. The Region is home to around 250 million smokers and nearly the same number of smokeless tobacco users. About 1.3 million deaths occur every year, including around 160,000 deaths due to exposure to second-hand smoke. The increasing trend of tobacco use and its devastating effects pose a grave threat to the health and well-being of the people of the Region. Thus, the implementation of the Regional Strategy is expected to eventually protect the people of the Region from the enormous negative health, social, economic and environmental consequences of tobacco consumption and exposure to tobacco smoke.


Summary

This profile on the implementation of the WHO Framework Convention on Tobacco Control in the South-East Asia Region provides an overview of the status of the implementation of the convention in the eleven Member States of the SEA Region. It highlights some major milestones achieved as well as the challenges faced while implementing tobacco control measures in Member countries.


Summary

Smokeless tobacco consumption in the South-East Asia Region is a growing threat to health. The region is a hub for smokeless tobacco production and use. This category of tobacco product is manufactured in various forms. The diversity of these tobacco products, their availability and affordability make them obvious alternatives to the relatively more expensive cigarettes. However, the dangers and risks associated with smokeless tobacco are not well understood by the population. Smokeless tobacco is not perceived as an urgent threat in many of the Member countries and consequently, tobacco control efforts for this type of tobacco use are not intense. The tobacco control agenda needs to keep up the pressure and apply a wider approach and holistic strategies to address this issue. To this end, the "Expert Group Meeting on Smokeless Tobacco Control and Cessation" was convened in New Delhi, India, on 16-17 August 2011. The meeting allowed experts to share information, identify the next steps on smokeless tobacco control and cessation, and provide inputs to a policy paper to be published later. This report compiles the issues faced by Member States concerning smokeless tobacco and provides recommendations to policy-makers and stakeholders.


Summary

Tobacco Cessation: A Manual for Nurses, Health Workers and other Health Professionals is a comprehensive manual on tobacco cessation. It provides a detailed overview of the extent and patterns of use of tobacco products in the South-East Asia (SEA) Region and the related health burden. Among the top 10 countries globally with the highest levels of tobacco use among males, as many as three are from the SEA Region. The Manual highlights the need to provide tobacco cessation interventions by nurses, health workers and other health professionals, and graphically depicts the adverse health effects of tobacco on almost all organs of the human body. In the section on interventions, the Manual reiterates that tobacco cessation efforts start with the successful identification of tobacco use. It provides effective tools and techniques for tobacco cessation interventions,
including visits and follow-up of patients, listing of pros and cons, worksheets, group-based interventions and pharmacotherapy. Apart from the usual methods of cessation such as tapering off and abrupt cessation (‘cold turkey’), the Manual also lists new and innovative interventions such as the ‘Recovery Calendar’. Above all, the Manual highlights the importance of recognizing the dangerous effects of tobacco use, the benefits of quitting and the need to provide effective follow-up to prevent ‘lapse’ and ‘relapse’. It includes a series of succinct, ready-to-use methods, counselling techniques and model motivational tools that can be practised by the health professional to promote tobacco cessation.


**Summary**

Helping People Quit Tobacco: A Manual for Doctors and Dentists is a comprehensive dossier on tobacco cessation with the help of intervention from doctors and dentists. The document begins with the premise that the core responsibility of any doctor or dentist includes reducing the use of tobacco among his patients and in the community, and encouraging tobacco cessation. The importance of the TEACH tool to meet the MPOWER goals of the World Health Organization are also enunciated. The Manual cites relevant statistics from the apex global tobacco surveys to highlight the extent and enormity of the tobacco epidemic in the South-East Asia Region, and also outlines the nature of harm caused by tobacco use, its inherent links with several debilitating diseases and the manifold risks of using smoking and smokeless tobacco products. The Manual encourages doctors and dentists to identify at the earliest possible stage tobacco use in a patient, and provides step-by-step guidelines on intervention and assisted cessation through counselling, motivational tools and medication or pharmacotherapy. A concluding section provides details on ‘lapse’ and ‘relapse’ and how to overcome the same.


**Summary**

The Brief Profile depicts vital information relating to the tobacco control programme in Myanmar. Carefully constructed with two distinct sets of information, the fact sheet provides background information on the nature and types of tobacco use and the activities undertaken in each of the six policy interventions of the MPOWER package for tobacco control. In addition, it has also provided a review of the activities and identified the future direction with a forward-looking approach.


**Summary**

Reducing the use of tobacco is a complex task as it involves enormous socio-cultural and health dimensions. It requires a multi-sectoral and integrated approach that includes consistent and continuous communication for behavioural and social change. Communication as such, is a strategic process to influence individual and group behaviour that needs systematic planning and implementation. This document tends to define the framework and the key elements of communication for tobacco control to be used in the Member States of the South-East Asia Region. It focuses on the major approaches of communication and guiding principles for planning and using the communication components for designing the effective communication for tobacco control programme. It suggests a model for communication planning based on communication objectives, target groups and potential barriers which determines the communication approach, message development and selection of media. It emphasizes on the importance of using media mix, partnership, capacity building and regular evaluation of communication activities.

Summary

Since 2007 the Bloomberg Global Initiative to Reduce Tobacco Use (BGI) is being implemented in the South-East Asia Region. Four countries from the Region - Bangladesh, India, Indonesia and Thailand - were selected as priority countries under the Initiative. In 2007 both human and financial support was provided to these countries to strengthen their capacity for tobacco control. The WHO South-East Asia Region was the first and only Region to have organized an orientation workshop for all BGI staff. The workshop was found to be useful for the implementation of the Initiative in the Region. It has also enhanced the knowledge and team spirit of the whole BGI team and provided a unique opportunity to discuss and share the challenges that the Initiative is facing in terms of coordination for effective implementation. The workshop provided the platform to discuss and decide on a common approach to take the Initiative to its logical fruition.


Summary

Smoking and exposure to second-hand smoke (SHS) are major contributors to the chronic disease burden in the South-East Asia Region. Due to weak tobacco control measures, especially inadequate measures in the area of SHS, a very large population in the Region is exposed to SHS. The regional profile on Smoke-free Environments depicts the situation with respect to exposure to SHS in the Region. It also describes briefly the existing measures in the Region for protecting people from SHS exposure. Making environments completely smoke-free is the most effective way to protect the population from exposure to SHS everywhere, including public places and workplaces. This can only be done by developing and strengthening smoke-free policies and legislation, and enforcing the same.


Summary

This Manual is designed for teachers who work with 13-15-year-old students in Member countries of the World Health Organization (WHO)'s South-East Asia (SEA) Region. The Manual uses skill- based health education through curricular and co-curricular activities. Skill-based health education is designed to help students acquire the knowledge, attitude and skills that are needed to make informed choices and decisions, understand the consequences of tobacco use and tobacco advertising, adopt and practise healthy behaviours to avoid risks and create conditions that are conducive to health. This approach also empowers students to contribute to the creation of tobacco-free environment in which they learn and live. The Manual provides young people with an opportunity to participate in an environmental approach to tobacco control. The decision that young people make about tobacco use are heavily influenced by the physical, social, economic and legal environments in which they live. The activities in the Manual represent a departure from the traditional approach of simply educating students not to use tobacco, which is often considered an ineffective strategy. The progressive vision helps young people move beyond a reliance on awareness education to embrace a comprehensive and science-based approach. The focus in the Manual is on what young people can do to create tobacco-free norms and environments and to thwart manipulative efforts of the tobacco industry to create tobacco addictions. The Manual includes classroom activities which a school can adopt either in the form of a regular or optional curriculum. It uses a series of activities which can be carried out as interactive/participatory activities in classrooms (curricular), or as field activities in the community (co-curricular activities). A participatory approach gives students the opportunity to observe and actively practice skills, thus being engaged in "learning by doing." In order to make these activities interactive, the class is split into small working groups and discussions are held in bigger groups based on inputs from the smaller groups. Schools that would use this Manual may adopt a similar pattern or can modify it according to their situations and needs. Teaching posters, handouts, worksheets, and answer sheets, are

**Summary**

As part of the General Obligations under Article 5 of the WHO Framework Convention on Tobacco Control (FCTC), each Party shall develop, implement and periodically update and review multisectoral national tobacco control strategies, plans of action and programmes in order to fully comply with the provisions of the Convention. In order to provide some general guidelines on how to develop these strategies and plans of action, the Regional Strategy for Tobacco Control and Regional Plan of Action for Tobacco Control were developed by the Regional Office. The Regional Strategy contains the vision and strategic plan for tobacco control in the WHO South-East Asia Region for the next five years (2006-2010). The Plan of Action was based on the Regional Strategy for Tobacco Control (2006-2010). While the Convention provides guidelines to reduce the harm from tobacco, definitive actions to control tobacco have to take place at the country level. The successful implementation of the FCTC provisions depends almost entirely on the ability of the countries. Some countries in the Region have already developed their national strategies and plans of action and others are in the process of doing so. These two documents would be helpful in revising the existing national strategies and plans of action in countries that have already developed the same to make them fully compatible with the WHO FCTC. The documents would also be helpful developing national strategies and plans of action by countries which have not yet done so.


**Summary**

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No abstract available


**Summary**

The manual is intended primarily for people who work in a health facility serving a 'local' population. A doctor or nurse or someone else in the health facility can use the guidelines to create changes in the communities served
by them. But people outside the medical or health professions too can use these guidelines effectively. The interventions (except sections in chapter 8 on 'cessation') can be

implemented by any concerned individual, and do not require special medical expertise. The manual can be used for self-instruction or for training. The activities suggested are for implementation at the level of local communities, not at national level. So the emphasis is on action relevant to a community or a clinic.

4. **Tobacco promotion: Advertising and sponsorship**


**Abstract**

Myanmar Tobacco Control Law of 2006 covers the control of all forms of tobacco use. After 7-year, tobacco use among adults did not see a decrease. The paper aimed to study the prevalence, details of the products, trade, legislation, tax, marketing, advertising and evidence on morbidity and mortality, and to make recommendations for policy options. Personal communications by authors and colleagues, and searches by keywords in PubMed and on Google, literature review and research from published reports, and various studies and surveys conducted in Myanmar and other countries. Smokeless tobacco use in Myanmar is the highest among ASEAN countries. A variety of SLT products used together with betel chewing poses a challenge; betel quid chewing has been accepted as a cultural norm in both rural and urban areas. Betel quid chewing usually starts at younger ages. Sale, marketing, and advertising of SLT are not under control and thus, road-side kiosks selling betel quid with SLT are mushrooming. Considerable trade of SLT products by illegal and legal means created an increase in access and availability. Low cost of SLT product enables high volume of use, even for the poor families. Taxation for raw tobacco and tobacco products is half the values of the tax for cigarettes. Effective enforcement, amendment of the law, and action for social change are needed.

PMID:25526245 [PubMed - in process]

5. **Tobacco economics including interference of tobacco industry**


**Summary:**

Over the past 20 years, with the liberalization of international trade, trade in tobacco and tobacco products has rapidly expanded. This has led to a corresponding rise in tobacco consumption across low- and middle-income countries since the 1980s, and poses a major threat to global public health. This phenomenon highlights the inevitable connection between international trade agreements and the tobacco control policies enshrined in the WHO Framework Convention on Tobacco Control (FCTC). An Expert Intercountry Consultation on Tobacco and Trade was held at the WHO Regional Office for South-East Asia, New Delhi on 3-4 October 2012. A total of 31 participants from the ministries of health, trade and, agriculture and legal offices from nine Member States as well as WHO staff from WHO country offices in Bangladesh, India, Indonesia, Myanmar and Nepal attended. Recommendations for the Member States were: (1) establishing and strengthening coordination between the ministries of health and trade on policies and regulations on trade and investment relating to tobacco and tobacco products; (2) promoting advocacy on health perspectives of international and investment agreements; (3) strengthening full implementation of the WHO FCTC; (4) mobilizing more funds for tobacco control in the Member States; (5) ensuring law enforcement and public compliance; and (6) conducting research on health cost studies and alternative livelihood for tobacco farmers. It was recommended that WHO should strengthen the capacities of Member States on health perspectives of international trade and investment agreements.


**Summary**

There is a fundamental and irreconcilable conflict between the interests of the tobacco industry and public health policy. On the one hand, the tobacco industry produces and promotes a product that has been scientifically proven to be highly addictive and harmful, and which exacerbates social ills, including poverty. On the other hand, governments and the public health sector try to improve the health of the population by implementing
measures to reduce tobacco use. As the countries work towards developing and enforcing tobacco control measures, interference by the tobacco industry to counter these measures increases. The growing, manufacturing, distribution and selling components of the tobacco industry get involved in such interference through different means. Article 5.3 of the WHO Framework Convention on Tobacco Control and its Guidelines recommend how such interference should be addressed. Nineteen delegates from different sectors of 10 countries of the WHO South-East Asia Region attended a regional meeting on countering tobacco industry interference, from 19-21 March 2013, at the WHO Regional Office for South-East Asia, New Delhi, to analyse this issue and formulate strategies to address it. The recommendations for the Member States were to: (1) review and revise as needed, the terms of reference of the national tobacco control focal points; (2) formulate and implement, within one year, a communication strategy to raise awareness among various government and nongovernment stakeholders about tobacco industry interference and measures to counter it; (3) develop and implement a sustainable and systematic national and regional monitoring mechanism to ensure that information related to the tobacco industry is current and accurate; (4) review, and where not available, formulate a code of conduct for national officials that provides guidance on how to prevent conflicts of interest, real or perceived, between the civil service, elected officials and other national officials and the tobacco industry interests; and (5) review, and where not available, formulate rules for interaction between government and the tobacco industry, based on Guidelines for Article 5.3 of the WHO Framework Convention on Tobacco Control.


Abstract

This paper examines the social, cultural, economic and legal dimensions of tobacco control in the South-East Asia Region in a holistic view through the review of findings from various studies on prevalence, tobacco economics, poverty alleviation, women and tobacco and tobacco control laws and regulations. Methods were Literature review of peer reviewed publications, country reports, WHO publications, and reports of national and international meetings on tobacco and findings from national level surveys and studies. Tobacco use has been a social and cultural part of the people of South-East Asia Region. Survey findings show that 30% to 60% of men and 1.8% to 15.6% of women in the Region use one or the other forms of tobacco products. The complex nature of tobacco use with both smoking and smokeless forms is a major challenge for implementing tobacco control measures. Prevalence of tobacco use is high among the poor and the illiterate. It is higher among males than females but studies show a rising trend among girls and women due to intensive marketing of tobacco products by the tobacco industry. Tobacco users spend a huge percent of their income on tobacco which deprives them and their families of proper nutrition, good education and health care. Some studies of the Region show that cost of treatment of diseases attributable to tobacco use was more than double the revenue that governments received from tobacco taxation. Another challenge the Region faces is the application of uniform tax to all forms of tobacco, which will reduce not only the availability of tobacco products in the market but also control people switching over to cheaper tobacco products. Ten out of eleven countries are Parties to the WHO Framework Convention on Tobacco Control and nine countries have tobacco control legislation. Enforcement of control measures is weak, particularly in areas such as smoke-free environments, advertisement at the point of sale and sale of tobacco to minors. Socio-cultural acceptance of tobacco use is still a major challenge in tobacco control efforts for the governments and stakeholders in the South-East Asia Region. The myth that chewing tobacco is less harmful than smoking tobacco needs to be addressed with public awareness campaigns. Advocacy on the integration of tobacco control with poverty alleviation campaigns and development programs is urgently required. Law enforcement is a critical area to be strengthened and supported by WHO and the civil society organizations working in the area of tobacco control.

PMID: 22089683 [PubMed - indexed for MEDLINE]


Summary

This strategy sets out the objectives and priority activities for resource mobilization for 2010-2011 to ensure effective implementation of the Strategic Action Plan for Tobacco Control in South-East Asia Region. It provides strategic approaches and guidance on the major steps for resource mobilization highlighting the process of assessment for resource requirement and the potential for raising it; analysis of donor intelligence, building
alliance and carrying out advocacy. It emphasizes on the need to diversify funding sources for sustainable financing to the programme and also on the importance of realistic programme development and management of resources.


Abstract

"British American Tobacco strongly believes children should not smoke, and smoking should only be for adults who understand the risks associated with it. Our Group companies support and run programmes worldwide tackling underage smoking, and we are committed to pooling our resources and experience globally with others in the tobacco industry--and with governments and NGOs--to help prevent youth smoking. Along with the other two largest international tobacco groups--Philip Morris International and Japan Tobacco International--our Group companies have funded and supported more than 130 Youth Smoking Prevention (YSP) programmes in more than 70 countries. We fully support laws and regulations on a minimum age for buying tobacco products, and penalties for retailers who break the law. Our company policy worldwide is not to market to anyone under 18 years old, or more if the law in a particular country sets the age higher."--BAT website November 2003.
1. Tobacco use Surveillance(surveys and reports)

1.1. Youth in general


Abstract

BACKGROUND: Smokeless tobacco is found to be as addictive and harmful as smoking but have not been explored into, especially among youth.

OBJECTIVES: This study was conducted to find the prevalence of tobacco chewing among college students in Nepal and the factors that have influence over their use.

STUDY DESIGN: A cross-sectional study with a self-administered questionnaire.

MATERIALS AND METHODS: Five colleges of different streams in Pokhara city were selected for the study. A total of 816 students participated. The study was conducted during the period of May 2006-February 2007, using a semi-structured, self-administered questionnaire.

RESULTS: Overall prevalence of ever tobacco chewing was 21.3% (males 30.2% and females 10.9%) among the youth with average age of initiation 15.7 years. Pan masala and gutka were used by 63.6% and frequency of use varied widely and only 5.7% said they were daily users. Reasons cited for chewing were most commonly 'just like it' or 'friends chew'. Multiple logistic regression analysis showed age, ever smoking status, being ever alcoholic, and having friends or family members who chewed were significantly associated with students' tobacco chewing. Almost one-tenth of the students believed they were addicted to chewing tobacco and 42.5% of them had tried to quit the habit.

CONCLUSION: The study shows a high prevalence of tobacco chewing by Nepali youth. Important factors that influenced the habit were having chewer friends, their own smoking and alcohol status and having family members who chewed. It is pertinent to consider these when formulating cessation and prevention programs.

PMID: 21976798 [PubMed] PMCID: PMC3180938


Abstract

OBJECTIVE: To estimate the prevalence of smoking among the college students and to identify the factors associated with smoking.

MATERIAL & METHODS: This is a cross sectional study carried out on 304 college students in Kathmandu valley using purposive sampling during the months of December 2009 to January 2010. The self administrated questionnaire was adopted from Global Youth Tobacco Survey 2007 (GYTS) and data were collected after the verbal consent taken. The statistical analysis was done using descriptive statistics, univariate and binary logistic regression to measure prevalence of smoking and to identify the association between dependent and independent variables.

RESULTS: We found 7 in 10 students were currently smokers. Among currently smokers, 78% were established smokers. The mean age of smoking onset was 14.15 years (SD=2.62). The mean number of cigarettes smoked per day was 5.03(SD=3.72) and average daily expenditure was Rs. 15.18 (SD=7.87). About 90% students tried to quit smoking and 17% non smokers were susceptibility smokers. The following factors: sex (adjusted odds ratio(aor)=3.88,95% CI=1.50;9.38), living with or without family members (aor=1.79,95% CI=1.01;3.33), father occupation (aor=1.88,95% CI=1.04;3.30), and friend's smoking habits (aor=4.60,95% CI =1.92;11.0) were associated with cigarette smoking.

CONCLUSION: There is the need of effective intervention programs to control cigarette smoking among college students.
Tobacco is the single largest risk factor for various diseases and its presence in the young heralds more serious problems as they may be exposed for longer periods. Prevalence and predictors of smoking among youth will aid in formulating effective preventive and control measures. A cross-sectional study was therefore conducted among 816 students selected from five colleges of Western Nepal using a self-administered questionnaire. Prevalence of ever smoking was 34.2% (males 47.6% and females 18.4%) and for current smoking was 17%. It was higher among youth belonging to 21 years or older as compared to younger age groups. Mean age of initiation was 16.8 years (standard deviation 2.8 years) and the most common reasons cited for smoking were; like it, to feel more relaxed, out of boredom and to look more mature. Proportion of youth who said they felt they were addicted was 43.1% and 64.7% said that they had tried to quit the habit. Most important predictors having independent effects on youth being ever smokers were having three or more smoker friends (OR=18), their own chewing (OR=4.8) or alcohol use (OR=4.2), male gender (OR=3.7) and the type of course they were pursuing, with professional course students having higher risk. With almost one fifth of college-going youth smoking and a higher prevalence in older age groups within them, smoking is a serious concern for young people in Western Nepal.

PMID:20593960[PubMed - indexed for MEDLINE]

Abstract

BACKGROUND: At least two rounds of the Global Youth Tobacco Survey (GYTS) have been completed in most of the countries in the World Health Organization South-East Asia region. Comparing findings from these two rounds provides trend data on smokeless tobacco (SLT) use for the first time.

METHODS: This study uses GYTS data from Bangladesh, Bhutan, India, Indonesia, Maldives, Myanmar, Nepal, Sri Lanka, Thailand, and Timor-Leste during 2006-2013. GYTS is a nationally representative survey of 13-15-year-old students using a consistent and standard protocol. Current SLT use is defined as using any kind of SLT products, such as chewing betel quid or nonbetel quid or snuffing any other products orally or through the nasal route, during the 30 days preceding the survey. Prevalence and 95% confidence intervals were computed using SAS/SUDAAN software.

RESULTS: According to most recent GYTS data available in each country, the prevalence of current use of SLT among youth varied from 5.7% in Thailand to 23.2% in Bhutan; among boys, from 7.1% in Bangladesh to 27.2% in Bhutan; and among girls, from 3.7% in Bangladesh to 19.8% in Bhutan. Prevalence of SLT was reported significantly higher among boys than girls in Bhutan (boys 27.2%; girls 19.8%), India (boys 11.1%; girls 6.0%), Maldives (boys 9.2%; girls 2.9%), Myanmar (boys 15.2%; girls 4.0%), and Sri Lanka (boys 13.0%; girls 4.1%). Prevalence of current SLT use increased in Bhutan from 9.4% in 2009 to 23.2% in 2013, and in Nepal from 6.1% in 2007 to 16.2% in 2011.

CONCLUSION: The findings call for countries to implement corrective measures through strengthened policy and enforcement.

PMID: 25526249 [PubMed - in process]


Abstract

BACKGROUND: Cigarette smoking habit usually begins in adolescence. The developing countries in South Asia like Pakistan, India, Bangladesh, and Nepal, where the largest segment of the population is comprised of adolescents, are more susceptible to smoking epidemic and its consequences. Therefore, it is important to identify the association between anti-smoking initiatives and current smoking status in order to design effective interventions to curtail the smoking epidemic in this region.

METHODS: This is a secondary analysis of national data from the Global Youth Tobacco Survey (GYTS) conducted in Pakistan (year 2003), India (year 2006), Bangladesh (year 2007), and Nepal (year 2007). GYTS is a school-based survey of students targeting adolescents of age 13-15 years. We examined the association of different ways of delivering anti-smoking messages with students’ current smoking status.

RESULTS: A total of 19,643 schoolchildren were included in this study. The prevalence of current smoking was 5.4% with male predominance. No exposure to school teachings, family discussions regarding smoking hazards, and anti-smoking media messages was significantly associated with current smoking among male students. Participants who were deprived of family discussion regarding smoking hazards (girls: odds ratio (OR) 1.56, 95% confidence interval (CI) 0.84-2.89, p value 0.152; boys: OR 1.37, 95% CI 1.04-1.80, p value 0.025), those who had not seen media messages (girls: OR 2.89, 95% CI 1.58-5.28, p value <0.001; boys: OR 1.32, 95% CI 0.91-1.88, p value 0.134), and those who were not taught the harmful effects of smoking at school (girls: OR 2.00, 95% CI 0.95-4.21, p value 0.066; boys: OR 1.89, 95% CI 1.44-2.48, p value <0.001) had higher odds of being current smokers after multivariate adjustment.

CONCLUSION: School-going adolescents in South Asia (Pakistan, India, Nepal, and Bangladesh) who were not exposed to anti-tobacco media messages or were not taught about the harmful effects in school or at home had higher odds of being current smokers than their counterparts.

PMID:24568532[PubMed - indexed for MEDLINE] PMCID:PMC3938898

Abstract

BACKGROUND: This paper examines the prevalence of current tobacco use among youth and adults in selected member countries of the South-East Asia Region using the data from school and household-based surveys included in the Global Tobacco Surveillance System.

MATERIALS AND METHODS: Global Youth Tobacco Survey (GYTS) data (years 2007-2009) were used to examine current tobacco use prevalence among youth, whereas Global Adult Tobacco Survey (GATS) data (years 2009-2010) were used to examine the prevalence among adults. GYTS is a school-based survey of students aged 13-15, using a two-stage cluster sample design, and GATS is a household survey of adults age 15 and above using a multi-stage stratified cluster design. Both surveys used a standard protocol for the questionnaire, data collection and analysis.

RESULTS: Prevalence of current tobacco use among students aged 13-15 varied from 5.9% in Bangladesh to 56.5% in Timor-Leste, and the prevalence among adults aged 15 and above was highest in Bangladesh (43.3%), followed by India (34.6%) and Thailand (27.2%). Reported prevalence was significantly higher among males than females for adults and youth in all countries except Bangladesh, Sri Lanka and Timor-Leste. Current use of tobacco other than manufactured cigarettes was notably higher than current cigarette smoking among youth aged 13-15 years in most countries of the Region, while the same was observed among adults in Bangladesh, India and Thailand, with most women in those countries, and 49% of men in India, using smokeless tobacco.

CONCLUSION: Tobacco use among youth and adults in member countries of the region is high and the pattern of tobacco consumption is complex. Tobacco products other than cigarettes are commonly used by youth and adults, as those products are relatively cheaper than cigarettes and affordable for almost all segments of the population. As a result, use of locally produced smoked and smokeless tobacco products is high in the region. Generating reliable data on tobacco use and key tobacco control measures at regular intervals is essential to better understand and respond with effective tobacco control intervention.

PMID: 22089684 [PubMed - indexed for MEDLINE]
CONCLUSION: Prevention of tobacco use among school students should be top priority of a country as they are long-term customers and replacement smokers who quit or die. Therefore comprehensive strategies as we proposed along with existing prevention programmes should be tightened to stop them from hazardous behaviours.


1.2. Children (including school going children)


Abstract

BACKGROUND: Worldwide, children are more heavily exposed to passive smoking than any other age group where majority of these occur in child’s house. Children’s passive smoking and risk of developing respiratory diseases has been well established in several studies. However, such studies are limited in Nepal. Therefore, the objective of this study was to determine association between household passive smoking and acute respiratory infection among under five children attending Kanti Children’s Hospital.

Methods: A descriptive, cross-sectional study using quantitative method was carried out in Kanti Children’s Hospital. Data was collected by face-to-face interview from 198 parents. Bivariate and multivariate analyses were performed to see association between household passive smoking and acute respiratory infection.

RESULTS: Among 198 children, 79(39.9%) were passive smokers. Among the total passive smokers, 31(39.2%) were exposed to paternal smoking, 18(22.8%) to parental smoking, 18(22.8%) to other member’s smoking and 12(15.2%) to maternal smoking. Among 36 daily passive smokers, 18(50.0%) were exposed to high amount and 18(50.0%) to low amount of passive smoking. Household passive smoking had a slight risk of developing acute respiratory infection where adjusted odds ratio was 1.35; however it was not statistically significant.

CONCLUSIONS: Children exposed to passive smoking had a slight risk of developing acute respiratory infection than non-passive smokers however, it was not statistically significant.


Abstract

Tobacco use continues to rise among young people in middle and low income countries, causing high premature death and disability. Most importantly, its initiation starts mainly during adolescence and persists for whole life. We conducted this meta-analysis to estimate the prevalence of current tobacco use among lower secondary to higher secondary students in Nepal. We searched and identified the studies which were published between 2003 and 2013 using MEDLINE, Google Scholar and NEPJOL. From five selected studies, total 7,832 eligible students were included in analysis. Considering the high degree of variability (Q = 82.6, I² = 95%) among selected studies, we used random effects model to estimate the weighted prevalence of current tobacco use and found as 13.9 % (10.2-17.5). This result shows that current tobacco use among lower secondary to higher secondary students still remains high, which compels an effective implementation of tobacco control programs and policies.

Abstract

BACKGROUND: The perceived risks and benefits of smoking may play an important role in determining adolescents' susceptibility to initiating smoking. Our study examined the perceived risks and benefits of smoking among adolescents who demonstrated susceptibility or non-susceptibility to smoking initiation.

METHODS: In October-November 2011, we conducted a population-based cross-sectional study in Jhaukhel and Duwakot Villages in Nepal. Located in the mid-hills of Bhaktapur District, 13 kilometers east of Kathmandu, Jhaukhel and Duwakot represent the prototypical urbanizing villages that surround Nepal's major urban centers, where young people have easy access to tobacco products and are influenced by advertising. Jhaukhel and Duwakot had a total population of 13,669, of which 15% were smokers. Trained enumerators used a semi-structured questionnaire to interview 352 randomly selected 14- to 16-year-old adolescents. The enumerators asked the adolescents to estimate their likelihood (0%-100%) of experiencing various smoking-related risks and benefits in a hypothetical scenario.

RESULTS: Principal component analysis extracted four perceived risk and benefit components, excluding addiction risk: (i) physical risk I (lung cancer, heart disease, wrinkles, bad colds); (ii) physical risk II (bad cough, bad breath, trouble breathing); (iii) social risk (getting into trouble, smelling like an ashtray); and (iv) social benefit (looking cool, feeling relaxed, becoming popular, and feeling grown-up). The adjusted odds ratio of susceptibility increased 1.20-fold with each increased quartile in perception of physical Risk I. Susceptibility to smoking was 0.27- and 0.90-fold less among adolescents who provided the highest estimates of physical Risk II and social risk, respectively. Similarly, susceptibility was 2.16-fold greater among adolescents who provided the highest estimates of addiction risk. Physical risk I, addiction risk, and social benefits of cigarette smoking related positively, and physical risk II and social risk related negatively, with susceptibility to smoking.

CONCLUSION: To discourage or prevent adolescents from initiating smoking, future intervention programs should focus on communicating not only the health risks but also the social and addiction risks as well as counteract the social benefits of smoking.

PMID:23452549[PubMed - indexed for MEDLINE] PMCID: PMC3599383


Abstract

INTRODUCTION: The tobacco use among the youth, in both smoking and smokeless forms, is quite high in the South East Asian region. Tobacco use is a major proven risk factor and contributes substantially to the rising epidemic of non-communicable diseases.

OBJECTIVES: To estimate the prevalence of tobacco use and determine associated factors among adolescent students of Dharan municipality.

DESIGN: Cross-sectional study.

SETTING: Secondary and higher secondary schools of Dharan municipality in Sunsari district of Nepal.

PARTICIPANTS: Students in middle (14-15 years) and late adolescence (16-19 years) from grades 9, 10, 11 and 12 were included.

PRIMARY OUTCOME MEASURE: Ever tobacco use which was defined as one who had not used any form of tobacco in the past 1 month but had tried in the past.

METHODOLOGY: Self-administered questionnaire adapted from Global Youth Tobacco Survey was used to assess tobacco use among the representative sample of 1312 adolescent students selected by stratified random sampling from July 2011 to July 2012. RESULTS: Out of 1454 students, 1312 students completed the questionnaires with a response rate of 90.23%. Prevalence of ever use of any tobacco product was 19.7% (95% CI 17.7 to 21.6). More than half of the tobacco users (51.9%) consumed tobacco in public places whereas almost a third (75.6%) of the consumers purchased tobacco from shops. Multivariate analysis showed that tobacco use was associated with late adolescence (OR: 1.64; 95% CI 1.17 to 2.28), male gender (OR: 12.20; 95% CI 7.78 to 19.14), type of school (OR=1.72; 95% CI 1.01 to 2.94), Janajati ethnicity (OR: 2.05; 95% CI 1.39 to 3.01) and receiving pocket money $Nepalese rupees 500/month (OR: 1.45; 95% CI 1.04 to 2.03). CONCLUSIONS:
Tobacco-focused interventions are required for school/college going students to promote cessation among users and prevent initiation, focussing on late adolescence, male gender, government schools, Janajati ethnicity and higher amount of pocket money.

PMID: 23418297 [PubMed] PMCID: PMC3585970


Abstract

BACKGROUND: The street children, a marginalised and vulnerable population to poor health, have grown all over the world and also in our country. The continuous exposure to harsh environment and nature of their life style threatens their mental, physical, social and spiritual well being. With the increasing number the problem is also growing at an alarming proportion. It is therefore important to have baseline data on their health problems.

OBJECTIVES: This study was conducted to identify the physical health problems among the street children of Dharan Municipality, Nepal.

MATERIALS AND METHODS: This is a cross sectional descriptive study. Forty eight subjects were included in the study. Research instruments included an interview schedule, physical health examination performa and lab investigations (i.e. blood for haemoglobin, urine routine examination/microscopic examination, stool routine examination/ microscopic examination).

RESULTS: Study results showed that 68.8% of the street children were between 11-15 years of age, 95.8% were males. Out of the total subjects 81.2% were found to be rag pickers. Research findings reveal that 100% of the subjects had at least one or more health problems. The study revealed that majority 87.5% had the habit of cigarette smoking, 50% had habit of consuming alcohol and 72.9% had the habit of taking drug. Dendrite (glue sniffing) was the only drug used by the respondents in this study. The most common health problems were head lice infestation (81.2%), headache (66.7%), cut injury (60.4%), common cold (52.1%), dental caries (52%), burning micturation (47.9%), cough (47.9%), underweight (43.8%), abdominal pain (39.6%), tinnitus (37.55%), gum bleeding (33.3%), joint pain (31.2%), eye inflammation (25%), leg cramps (25%), palpable lymph nodes (25%), chest pain (18.8%), skin lesions (16.7%), abnormal vision (8.3%).

CONCLUSION: Most of the diseases were due to poor health habits. It was found that the nature of work, their life styles and the different types of behaviour they adapt finally lead them to many health problems. The health problem can be prevented, if an integrated program that involves all the issues are developed and implemented.

PMID:20071876[PubMed - indexed for MEDLINE]


Abstract

Tobacco use is one of the chief preventable causes of death and illness in the world. The World health Organization attributes some 5 million deaths a year to tobacco, a figure that is expected to rise to 8.4 million deaths a year by 2020, more than a third of them in developing countries. Recent trends indicate an earlier age of initiation and rising smoking prevalence rates among children and adolescents especially those from developing countries.

OBJECTIVE: A cross sectional descriptive study to determine the magnitude and type of tobacco use among adolescent high school students of Pokhara sub metropolitan city, their knowledge about the health hazards, and their exposure to tobacco promotional advertisements and environment tobacco smoke.

METHODS: This is a cross sectional descriptive survey among school adolescents of grades 8, 9 and 10 of Pokhara sub metropolitan city. Multi stage random sampling was applied. Data collection was carried out by using anonymous self-administered questionnaire.
RESULTS: Nearly half (47.1%) of the adolescent students ever used tobacco products. One in seven (13.2%) were current (either regular or occasional) users, one in four (22.7%) were experimental users (i.e., used any tobacco products no more than 10 times) and one in ten (10.6%) were past users of any tobacco product. The average age of initiating tobacco was about 12.65 years. Nearly one third (32.3%) of adolescent students reported seeing tobacco promotional advertisements in the media or at sporting or social events in the last 30 days. About 3 or 5 students (7.5% regularly and 50.9% occasionally) were exposed to environmental tobacco smoke in their home. More than 4 of 5 students (3% regularly and 80.3% occasionally) were exposed to environmental tobacco smoke in public places.

CONCLUSION: High percentages of students were ever-users of tobacco (both smoked and smokeless tobacco products). The age of initiating tobacco use was low. The proportion of regular tobacco users is likely to increase as a high proportion of users are currently experimental users, knowledge about the health hazards was poor, among the students surveyed and they reported to frequently being exposed to tobacco advertisements and environment tobacco smoke. School based programmes to discourage the use of both tobacco products seem necessary. Complete ban in tobacco advertisements and promotional activities as well as strict monitoring to control smoking in public places is necessary.

1.3. Health professionals (including medical and dental students)


Abstract

BACKGROUND: For the past 30 years, there have been no changes in the text-only cigarette warning labels in Nepal. During this same time period, other countries placed large graphic warning labels on cigarette packages. The purpose of the current study was primarily to compare the differences in reactions to different types of warning labels on cigarette packages, with a specific focus on whether the new warning label adopted by WHO FCTC was better than the text-only label used by Nepal.

MATERIAL AND METHODS: This study was conducted in Gandaki Medical College Teaching Hospital (GMCTH) in 2012, in a tertiary care hospital located in the western region of Nepal. Eligible study participants included in this survey were those aged 18 years and over and those who are studying MBBS/Nursing or who were employees of GMCTH. 500 participants finished the survey. Participants were shown nine types of warning labels found on cigarette packages. They comprised one text only warning label used within Nepalese market and eight foreign brand labels. Participants were asked about the impact of the warning labels on: their knowledge of harm from smoking, giving cigarettes as a gift, and quitting smoking.

RESULTS: On comparing the Nepalese warning label with other foreign labels with regards to providing knowledge of harm warning, impact of quitting smoking and giving cigarettes as a gift, the overseas labels were found to be more effective. Both smokers and non-smokers thought that warning labels with text plus graphics were substantially more of a deterrent than text-only labels.

CONCLUSION: The findings from this study support previous research that has found that text-plus graphic warning labels were more salient and potentially more effective than text-only labels. Warning labels are one of the component of comprehensive tobacco control and smoking cessation efforts. Stronger warnings on cigarette packages need to be part of a larger Nepalese public health educational efforts.

PMID: 24298480 [PubMed] PMCID: PMC3843434


Abstract

BACKGROUND: Smoking and health are intimately related and thus, smoking among future health care personnel is an important issue. As future physicians and dentists who will witness the continued burden of smoking-related diseases among their patients, represent a primary target for smoking prevention programs.

OBJECTIVES: To explore the magnitude of smoking problem and assess the major causes aggravating the burden of smoking among medical and dental students. METHODS: A cross sectional study was conducted between June and July 2009 among 345 medical and dental students. Pre-tested self-administered questionnaire
containing questions regarding smoking and its various correlates were used to collect the data. Chi square test was used for testing hypothesis.

**RESULTS:** Prevalence of smoking was estimated as 38.4%, among whom majority started smoking during 15 to 19 years of life. Peer pressure was the major cause behind smoking (29.5%). Nearly one third of the participants used to consume alcohol along with smoking. Presence of parental smoking and use of other drugs were significantly associated with smoking among the students.

**CONCLUSION:** Tobacco smoking is a significant health problem among the male medical and dental students. Medical and dental students were approached as they are the treatment providers for smoking and disease related to it in the future. The results in our study are discouraging and reveal that the medical knowledge regarding ill effects of smoking has not been able to check its use.

PMID:23774410[PubMed - indexed for MEDLINE]

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**Abstract**

**BACKGROUND:** Often, lung cancer is diagnosed at terminal stages. Poor awareness about the symptoms or risk factors of lung cancer among medics may be one of the factors for delayed diagnosis.

**OBJECTIVE:** We explored the knowledge of medical students and their behavior with the patients of lung cancer.

**METHOD:** Qualitative and quantitative approaches were used for data collection from 153 medical student of Kathmandu University School of Medical Sciences from December 2011 to May 2012.

**RESULTS:** Among the results, eighty-nine students had over 80% knowledge of the 14 cancer warning signs, among them 83% knew the nine risk factors for lung cancer. Twenty-three students told lung cancer can be hereditary. Sixty five percent of all participants believed that lung cancer can be detected at early stage; of them 81% told that it can be treated. About 24% of the total students were current or exsmokers and about half of them believed that lung cancer does not occur in light smokers. Only 10% have heard of Framework Convention on Tobacco Control in Nepal.

**CONCLUSION:** Study finds that all medical students who know about any cancers may not necessarily have knowledge about lung cancers. Their perception about the cause of lung cancer may be influenced by their smoking behavior and there was little knowledge of public health measures for smoking control. Awareness about national policies needs to be increased.

PMID:23434965[PubMed - indexed for MEDLINE]

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**Abstract**

**BACKGROUND:** Many studies have indicated that the young adults (18-24 years) were not fully aware of health consequences of cigarette smoking. The objective of the study is to determine the prevalence of cigarette smoking among college students and to assess how they perceive the risks of cigarette smoking.

**METHODS:** A cross-sectional study was carried out in Kathmandu valley during mid February and March 2011. This study comprises 340 students from seven private public health colleges of Kathmandu valley. The anonymous question contains information on demographic characteristics, smoking habits, and smoking related risk perception. Data was analyzed by both descriptive and inferential statistics including logistic regression with the help of Microsoft Excel 2007 and SPSS 11.5 version.
RESULTS: Overall prevalence rate of ever smokers was 33% and about 16% were current smokers. Non-smokers were about 3 times more likely than smokers to report that smoking one to five cigarettes per day was harmful (aOR = 2.60; 95% CI: 1.34-5.05). Similarly, Non Smokers were 2 times more likely to believe the statement that people get addicted to tobacco as to cocaine or heroin (aOR = 2.27; 95%CI: 1.33-4.57). Nearly one fifth of smokers and non-smokers believed that smoking on a weekend or a couple of days a week was harmful, and there was no significant difference between two groups (P>0.05).

CONCLUSIONS: The study reveals the smoker students were less aware of risks of cigarette smoking and its health consequences. Thus there is a need to promote effective anti-smoking messages focusing effects of each cigarette they smoke.

PMID: 22929849 [PubMed - indexed for MEDLINE]


Abstract

BACKGROUND: HIV care providers may be optimally positioned to promote smoking behaviour change in their patients, among whom smoking is both highly prevalent and uniquely harmful. Yet research on this front is scant, particularly in the developing country context. Hence, this study describes smoking behaviour among people living with HIV/AIDS (PLWHA) in the Kathmandu Valley of Nepal, and assesses the association between experience of physician-delivered smoking status assessment and readiness to quit among HIV-positive smokers.

METHODS: We conducted a cross-sectional survey of PLWHA residing in the Kathmandu Valley, Nepal. Data from 321 adult PLWHA were analyzed using multiple logistic regression for correlates of current smoking and, among current smokers, of motivational readiness to quit based on the transtheoretical model (TTM) of behaviour change.

RESULTS: Overall, 47% of participants were current smokers, with significantly higher rates among men (72%), ever-injecting drug users (IDUs), recent (30-day) alcohol consumers, those without any formal education, and those with higher HIV symptom burdens. Of 151 current smokers, 34% were thinking seriously of quitting within the next 6 months (contemplation or preparation stage of behaviour change). Adjusting for potential confounders, experience of physician-delivered smoking status assessment during any visit to a hospital or clinic in the past 12 months was associated with greater readiness to quit smoking (AOR = 3.34; 95% CI = 1.05,10.61).

CONCLUSIONS: Roughly one-third of HIV-positive smokers residing in the Kathmandu Valley, Nepal, are at the contemplation or preparation stage of smoking behaviour change, with rates significantly higher among those whose physicians have asked about their smoking status during any clinical interaction over the past year. Systematic screening for smoking by physicians during routine HIV care may help to reduce the heavy burden of smoking and smoking-related morbidity and mortality within HIV-positive populations in Nepal and similar settings.

PMID: 21878132 [PubMed - indexed for MEDLINE] PMCID: PMC3175193


Abstract

BACKGROUND: Tobacco smoking issues in developing countries are usually taught non-systematically as and when the topic arose. The World Health Organisation and Global Health Professional Student Survey (GHPSS) have suggested introducing a separate integrated tobacco module into medical school curricula. Our aim was to assess medical students’ tobacco smoking habits, their practices towards patients’ smoking habits and attitude towards teaching about smoking in medical schools.
METHODS: A cross-sectional questionnaire survey was carried out among final year undergraduate medical students in Malaysia, India, Nepal, Pakistan, and Bangladesh. An anonymous, self-administered questionnaire included items on demographic information, students’ current practices about patients’ tobacco smoking habits, their perception towards tobacco education in medical schools on a five point Likert scale. Questions about tobacco smoking habits were adapted from GHPSS questionnaire. An ‘ever smoker’ was defined as one who had smoked during lifetime, even if had tried a few puffs once or twice. ‘Current smoker’ was defined as those who had smoked tobacco product on one or more days in the preceding month of the survey. Descriptive statistics were calculated.

RESULTS: Overall response rate was 81.6% (922/1130). Median age was 22 years while 50.7% were males and 48.2% were females. The overall prevalence of ‘ever smokers’ and ‘current smokers’ was 31.7% and 13.1% respectively. A majority (> 80%) of students asked the patients about their smoking habits during clinical postings/clerkships. Only a third of them did counselling, and assessed the patients’ willingness to quit. Majority of the students agreed about doctors’ role in tobacco control as being role models, competence in smoking cessation methods, counseling, and the need for training about tobacco cessation in medical schools. About 50% agreed that current curriculum teaches about tobacco smoking but not systematically and should be included as a separate module. Majority of the students indicated that topics about health effects, nicotine addiction and its treatment, counselling, prevention of relapse were important or very important in training about tobacco smoking.

CONCLUSION: Medical educators should consider revising medical curricula to improve training about tobacco smoking cessation in medical schools. Our results should be supported by surveys from other medical schools in developing countries of Asia.

PMID:21080923[PubMed - indexed for MEDLINE] PMCID: PMC2994841


Abstract

BACKGROUND: Substance use is very rampant in a developing country like Nepal. Unfortunately, medical field is not exempt from it either. Substance use among medical students and doctors not only reduces their efficiency at present but also increases their DALY on long term. The main objectives of the study were to assess the prevalence of substance use among medical student and to find out whether substance use started before or after joining the medical school.

METHODS: The study design employed for the research was descriptive cross sectional. A structured questionnaire about current use of tobacco, alcohol and marijuana was used to collect the data from third year students from eight medical and one dental college from across the country having 2006 batch.

RESULTS: The overall response rate was 74.12% (N=510). Among those who responded, prevalence of substance use was 49.6%, of which 38.2% were Nepalese nationals and 11.4% were foreign nationals and 39% were male and 10.6% female. Alcohol based product users were 52.3%, tobacco based product users were 55% and marijuana users were 65.7% and all started using them after joining the medical school.

CONCLUSIONS: Almost half of the respondents were involved in some sort of substance use and more than half of those using started after joining medical school. Hence if proper measures are taken to address this then its prevalence can be significantly reduced if not eliminated completely.

PMID: 21879007 [PubMed - indexed for MEDLINE]

1.3.1. Global Health Professional Students Survey(GHPSS)

Abstract

BACKGROUND: The Medical and Dental Global Health Professions Student Surveys (GHPSS) are surveys based in schools that collect self-administered data from students on the prevalence of tobacco use, exposure to second-hand smoke, and tobacco cessation training, among the third-year medical and dental students.

MATERIALS AND METHODS: Two rounds of medical and dental GHPSS have been conducted in Bangladesh, India, Myanmar, Nepal, Sri Lanka, and Thailand, among the third-year medical and dental students, between 2005 and 2006 and 2009 and 2011.

RESULTS: The prevalence of any tobacco use among third-year male and female medical students did not change in Bangladesh, India, and Nepal between 2005 and 2006 and 2009 and 2011; however, it reduced significantly among females in Myanmar (3.3% in 2006 to 1.8% in 2009) and in Sri Lanka (2.5% in 2006 to 0.6% in 2011). The prevalence of any tobacco use among third-year male dental students did not change in Bangladesh, India, Nepal, and Thailand between 2005 and 2006 and 2009 and 2011; however, in Myanmar, the prevalence increased significantly (35.6% in 2006 to 49.5% in 2009). Among the third-year female students, a significant increase in prevalence was noticed in Bangladesh (4.0% in 2005 to 22.2% in 2009) and Thailand (0.7% in 2006 to 2.1% in 2011). It remained unchanged in the other three countries. Prevalence of exposure to second-hand smoke (SHS) both at home and in public places, among medical students, decreased significantly in Myanmar and Sri Lanka between 2006 and 2009 and in 2011. Among dental students, the prevalence of SHS exposure at home reduced significantly in Bangladesh, India, and Myanmar, and in public places in India. However, there was an increase of SHS exposure among dental students in Nepal, both at home and in public places, between 2005 and 2011. Medical students in Myanmar, Nepal, and Sri Lanka reported a declining trend in schools, with a smoking ban policy in place, between 2005 and 2006 and 2009 and 2011, while proportions of dental students reported that schools with a smoking ban policy have increased significantly in Bangladesh and Myanmar. Ever receiving cessation training increased significantly among medical students in Sri Lanka only, whereas, among dental students, it increased in India, Nepal, and Thailand.

CONCLUSION: Trends of tobacco use and exposure to SHS among medical and dental students in most countries of the South-East Asia Region had changed only relatively between the two rounds of GHPSS (2005-2006 and 2009-2011). No significant improvement was observed in the trend in schools with a policy banning smoking in school buildings and clinics. Almost all countries in the SEA Region that participated in GHPSS showed no significant change in ever having received formal training on tobacco cessation among medical and dental students.

PMID: 23442402 [PubMed - indexed for MEDLINE]
that they should receive training on counselling patients to quit using tobacco, but in 73 of 80 sites less than 40% of the students reported they received such training.

CONCLUSIONS: Health professional schools, public health organisations and education officials should discourage tobacco use among health professionals and work together to design and implement programmes that train all health professionals in effective cessation counselling techniques. If the goal of the tobacco control community is to reduce substantially the use of tobacco products, then resources should be invested in improving the quality of education of health professionals with respect to tobacco control.

PMID: 18474539 [PubMed - indexed for MEDLINE]

1.4. Educational personnel and other professional groups


Abstract

At current era of globalization, media is the double edged sword that is important both for health education as well as the stimulation of unhealthy behaviour. In Nepal, though there is ban on most forms of advertising, it is not clear about placement of tobacco advertisement in TV, films and other forms of media. Studies about cigarette smoking and its association with media are inadequate in Nepal. The objective of this study was to explore the role of media in cigarette smoking habit of adolescents in Nepal. A cross-sectional study was conducted among 394 adolescent students by using questionnaire method in 3 randomly selected colleges of Kathmandu district, Nepal. Data were analysed by using bivariate and multinomial logistic regression analysis. Statistically significant relationship at 95% CI was found between cigarette smoking status and media related variables like: seeing cigarette advertisement, reading fashion magazine, attending musical program sponsored by cigarette companies, watching movies in cinema hall, liking heavy metal/hard rock music, television watching time and desire to smoke if favourite artist smokes. Multinomial logistic regression showed that those with high receptivity to cigarette advertisement were likely to be current smokers (OR = 71.416, CI: 8.796 - 579.823) and ever smokers (OR = 9.582, CI: 2.201 - 41.714) compared to never smokers. About 79% of respondents agreed that media teaches different ways of smoking to its audiences. Different forms of media including cinema, music, magazines, television, games and music sponsorship are found to be important predictors for smoking status of college students in urban Nepal. Thus smoking prevention activities should consider role of media in smoking provocation among adolescents.


Abstract

INTRODUCTION: The consumption of tobacco related products by the school teachers is a bad habit. On account of its wastage of money, it is injurious to health and wrong role model for the students.

METHODS: Cross-sectional descriptive study was conducted using multistage proportionate random sampling technique among 210 teachers aged 22 to 59 years old from 85 schools in Mahottary district during January to June, 2007.

RESULTS: Overall, prevalence of any form of tobacco use among school teachers was 57.1 percent. Only male teachers (64.9%) used tobacco. According to level wise, Primary (66.1%), Lower Secondary (63.9%) and Secondary level (61.8%) teachers were users of tobacco. Tobacco use was more prevalent in primary school teachers. Khaini (68.3%) and pan (60.8%) were mainly used by the teachers. More than 61 percent of the teachers were daily users of smoking. 60.8 percent of the teachers used tobacco inside the school premises. Most of the users initiated tobacco by 16-20 years of age. A substantial number of teachers initiated tobacco usage due to imitation and peer pressure. More than fifty per cent of the teachers were using tobacco due to unsatisfaction from profession, family problems, entertainment, as a part of culture, as it is easily accessible and available, etc.

CONCLUSION: A high proportion (57.1%) of school teachers were any form of tobacco users. Only male teachers (64.9%) used tobacco but female teachers did not use any form of tobacco at all because of social norm. Most (60.8%) of the teachers used tobacco and tobacco products inside the school premises. This behavior of teachers will affect students to start using tobacco.
1.4.1. Global School Personnel Survey (GSPS)


1.5. Rural communities


Abstract

OBJECTIVE: We examined risk factors of smoking and the association between smoking and pregnancy-related and 6-month infant mortality in rural Nepal, where 30% women reported smoking during pregnancy.

DESIGN: Cross-sectional analysis of risk factors associated with smoking status and health consequences of smoking, using prospective data collected as part of a randomized community trial to examine the effect of maternal vitamin A or beta-carotene supplementation on maternal mortality.

SETTING: Rural, southeastern plains of Nepal.

SUBJECTS AND METHODS: A total of 17,767 women contributed at least one pregnancy during 3.5 y of the study. Data on cigarette or bidi (rolled tobacco) smoking were collected using a 7-day recall, twice during pregnancy. Associations between smoking status and maternal diet, morbidity profile, household socioeconomic status and serum concentration of retinol, carotenoids and tocopherols were examined. Further, relative risk (RR) and 95% confidence intervals (CI) were calculated to estimate supplement effects on pregnancy-related mortality, stratified by smoking status during pregnancy.

RESULTS: Smokers were more likely to be older, illiterate and poor compared to nonsmokers. Fruit and vegetable consumption among smokers and nonsmokers did not vary. However, smokers were more likely to consume meat/fish/eggs and less likely to consume milk than nonsmokers. They were also more likely to report symptoms of vaginal bleeding, edema, severe headache and convulsions during pregnancy relative to nonsmokers. Mortality per 100,000 pregnancies appeared to be higher among smokers than nonsmokers in the placebo group (915 vs 584, RR=1.57, 95% CI: 0.80-3.08), beta-Carotene supplementation reduced pregnancy-related mortality both among smokers (RR=0.31 95% CI: 0.11-0.89) and nonsmokers (RR=0.41, 95% CI: 0.19-0.89). Similar results obtained with vitamin A supplementation were not statistically significant. Infant mortality up to 6 months was approximately 30% higher among smokers compared to nonsmokers in the placebo group both before and after adjusting for confounding factors. Neither supplement given to women reduced infant mortality.

CONCLUSIONS: Cigarette smoking during pregnancy is associated with an increased risk of maternal and infant mortality in rural Nepal. beta-Carotene and to some extent vitamin A may reduce the risk of pregnancy-related mortality, but not infant mortality, among both smokers and nonsmokers.

PMID: 14749738 [PubMed - indexed for MEDLINE]


Abstract

BACKGROUND: The perceived risks and benefits of smoking may play an important role in determining adolescents' susceptibility to initiating smoking. Our study examined the perceived risks and benefits of smoking among adolescents who demonstrated susceptibility or non susceptibility to smoking initiation.

METHODS: In October-November 2011, we conducted a population-based cross-sectional study in Jhaukhel and Duwakot Villages in Nepal. Located in the mid-hills of Bhaktapur District, 13 kilometers east of Kathmandu, Jhaukhel and Duwakot represent the prototypical urbanizing villages that surround Nepal's major urban centers, where young people have easy access to tobacco products and are influenced by advertising. Jhaukhel and Duwakot had a total population of 13,689, of which 15% were smokers. Trained enumerators used a semi-structured questionnaire to interview 352 randomly selected 14- to 16-year-old adolescents. The enumerators asked the adolescents to estimate their likelihood (0%-100%) of experiencing various smoking-related risks and benefits in a hypothetical scenario.
RESULTS: Principal component analysis extracted four perceived risk and benefit components, excluding addiction risk: (i) physical risk I (lung cancer, heart disease, wrinkles, bad colds); (ii) physical risk II (bad cough, bad breath, trouble breathing); (iii) social risk (getting into trouble, smelling like an ashtray); and (iv) social benefit (looking cool, feeling relaxed, becoming popular, and feeling grown-up). The adjusted odds ratio of susceptibility increased 1.20-fold with each increased quartile in perception of physical Risk I. Susceptibility to smoking was 0.27- and 0.90-fold less among adolescents who provided the highest estimates of physical Risk II and social risk, respectively. Similarly, susceptibility was 2.16-fold greater among adolescents who provided the highest estimates of addiction risk. Physical risk I, addiction risk, and social benefits of cigarette smoking related positively, and physical risk II and social risk related negatively, with susceptibility to smoking.

CONCLUSION: To discourage or prevent adolescents from initiating smoking, future intervention programs should focus on communicating not only the health risks but also the social and addiction risks as well as counteract the social benefits of smoking.

PMID: 23452549 [PubMed - indexed for MEDLINE] PMCID: PMC3599383


1.6. Urban communities


Abstract

BACKGROUND: Susceptibility to smoking is defined as an absence of firm commitment not to smoke in the future or when offered a cigarette by best friends. Susceptibility begins in adolescence and is the first step in the transition to becoming an established smoker. Many scholars have hypothesized and studied whether psychosocial risk factors play a crucial role in preventing adolescent susceptibility to smoking or discourage susceptible adolescents from becoming established smokers. Our study examined sociodemographic and family and childhood environmental factors associated with smoking susceptibility among adolescents in a peri-urban area of Nepal.

DESIGN: We conducted a population-based cross-sectional study during October-November 2011 in the Jhaukhel-Duwakot Health Demographic Surveillance Site (JD-HDSS) located in a peri-urban area near Kathmandu, the capital city of Nepal, where tobacco products are easily available. Trained local enumerators conducted face-to-face interviews with 352 respondents aged 14-16. We used stepwise logistic regression to assess sociodemographic and family and childhood environmental factors associated with smoking susceptibility.

RESULTS: The percentage of smoking susceptibility among respondents was 49.70% (95% CI: 44.49; 54.93). Multivariable analysis demonstrated that smoking susceptibility was associated with smoking by exposure of adolescents to pro-tobacco advertisements (AOR [adjusted odds ratio] =2.49; 95% CI: 1.46-4.24), the teacher (2.45; 1.28-4.68), adolescents attending concerts/picnics (2.14; 1.13-4.04), and smoking by other family members/relatives (1.76; 1.05-2.95).

CONCLUSIONS: Smoking susceptible adolescents are prevalent in the JD-HDSS, a peri-urban community of Nepal. Several family and childhood environmental factors increased susceptibility to smoking among Nepalese non-smoking adolescents. Therefore, intervention efforts need to be focused on family and childhood environmental factors with emphasis on impact of role models smoking, refusal skills in social gatherings, and discussing harmful effects of smoking with family members and during gatherings with friends.

PMID: 25034345 [PubMed - in process] PMCID: PMC4102834

1.7. Women

Tobacco use is poised to kill as many as 1 billion people in the 21st century, primarily from non-communicable diseases. Less often noted is the effect of tobacco use and second-hand smoke exposure on maternal and child health. Cigarette smoking during pregnancy poses serious risk to the mother and her developing child, and second-hand smoke exposure is now recognised as an important cause of adult and child morbidity and mortality. Pregnancy is an ideal opportunity to intervene with mothers and families to prevent and control tobacco use, and should be a priority for both tobacco control and maternal and child health experts.

**Comment on**

- Tobacco use in pregnant women: analysis of data from Demographic and Health Surveys from 54 low-income and middle-income countries. [Lancet Glob Health. 2014]
  
  PMID: 25304402 [PubMed - in process] (mentions Nepal)


**Abstract**

**BACKGROUND:** Worldwide, use of tobacco is viewed as an important threat to the health of pregnant women and their children. However, the extent of tobacco use in pregnant women in low-income and middle-income countries (LMICs) remains unclear. We assessed the magnitude of tobacco use in pregnant women in LMICs (including Nepal).

**METHODS:** We used data from Demographic and Health Surveys (DHS) done in 54 LMICs between Jan 1, 2001, and Dec 1, 2012, comprising 58,922 pregnant women (aged 15-49 years), which were grouped by WHO region. Prevalence of current tobacco use (smoked and smokeless) was estimated for every country. Pooled estimates by regions and overall were obtained from random-effects meta-analysis.

**FINDINGS:** Pooled prevalence of any tobacco use in pregnant women in LMICs was 2.6% (95% CI 1.8-3.6); the lowest prevalence was in the African region (2.0, 1.2-2.9) and the highest was in the Southeast Asian region (5.1%, 1.3-10.9). The pooled prevalence of current tobacco smoking in pregnant women ranged from 0.6% (0.3-0.8) in the African region to 3.5% (1.5-12.1) in the Western Pacific region. The pooled prevalence of current smokeless tobacco use in pregnant women was lowest in the European region (0.1%, 0.0-0.3) and highest in the Southeast Asian region (2.6%, 0.0-7.6).

**INTERPRETATION:** Overall, tobacco use in pregnant women in LMICs was low; however high prevalence estimates were noted in some LMICs. Prevention and management of tobacco use and exposure to second-hand smoke in pregnancy is crucial to protect maternal and child health in LMICs.

**Comment in**

  
  PMID: 25304418 [PubMed - in process]


**Abstract**

**BACKGROUND:** Non-communicable diseases are the leading causes of death globally, killing more people each year than all other causes combined. As many other developing countries, Nepal is also facing double burden of diseases. The aim of present study was to assess gender wise differences on prevalence of risk factors of non-communicable diseases.

**METHODS:** This was a community based cross sectional study which was based on WHO's STEP approach for surveillance risk factors of non-communicable diseases among males and females. Multi-staged sampling

RESULTS: More than two-fifth of male and one-fifth of female respondents were currently using tobacco. The proportion of current alcohol users was found higher among the male respondents (28.6%) than their female counterparts (13.6%) (P<0.001). Only 35 (5.3%) of males and 13 (2.3%) of females were found consuming adequate (≥5 serving) intake of fruits per day. Study revealed that hypertension was slightly higher in male 165 (24.8%) than their female counterparts 111 (19.3%) but differences between two genders were statistically not significant.

CONCLUSIONS: The findings of present study suggest that there is high prevalence of risk factors of non-communicable diseases among both sexes in central Nepal. The finding emphasises the need for a focused national strategies targeting to tackle this modern epidemic of non-communicable diseases by incorporating primordial prevention activities to all adult population irrespective to gender.

PMID: 25574999 [PubMed - in process]


Abstract

This study documented the prevalence and correlates of tobacco use among women of reproductive age in Nepal using nationally representative data. We utilized the 2006 Nepal Demographic and Health Survey that interviewed 10,793 women and 4,397 men. We analyzed the couple’s data or households (N = 2,600) in which both husband and wife were interviewed. We examined the effects of women's empowerment-measured by education, employment, intra-household decisions, and age-on their tobacco use controlling for other individual and household characteristics. Women's empowerment had mixed effects on tobacco use. While women's education was inversely associated with their tobacco use, their age, employment and ability to make intra-household mobility decisions were positively associated with smoking. Women with primary and beyond primary education were 48 and 92 % less likely to smoke compared to women with no education, respectively. Tobacco use among women increased dramatically with age from 8 % in teen years to 42 % in their forties. A 1 year increase in age increased the odds of tobacco use by 6 %. Women whose husbands smoked were twice as likely to smoke. Nepal should not only restrict tobacco use in public places by implementing its Tobacco Control and Regulatory Act of 2010 but also focus on encouraging smoke-free homes by increasing awareness about the health consequences of tobacco use and secondhand smoke among populations most likely to smoke that include nearly all men, employed women, women with low levels of education, women whose spouses smoke and those who are 30 and above in age. Additionally, a long term goal should be to ensure at least 5th grade of education for all girls.

PMID: 22527772 [PubMed - indexed for MEDLINE]


Summary

This "Brief Profile on Gender and Tobacco in South-East Asia Region" emphasizes the need for a gender-specific approach to tobacco control. It urges Member States to take measures to address gender-specific issues when developing tobacco control strategies. It also describes the situation, challenges and opportunities related to gender and tobacco use in the Region.


Abstract

The association between maternal smoking and adverse child health outcomes has not been systematically explored in less developed countries, especially in Nepal where over a quarter of women of reproductive age smoke tobacco products. This study aims to quantify the effect of maternal smoking on acute respiratory infection (ARI) symptoms among children aged below five years, using the 2001 Nepal Demographic and Health Survey. It is hypothesized that children born to mothers who smoke frequently are at higher risk of developing ARI symptoms. Four-level random intercept logistic regression models were used to disentangle the independent effect of maternal smoking on children's ARI symptoms, controlling for potential biological, socioeconomic, seasonal and spatial variables. Maternal smoking status had a significant effect on children's ARI symptoms; the effects were significantly higher (adjusted OR 1.41; 95% CI 1.02-1.96) among those born to mothers who smoked more frequently than their counterparts. Furthermore, a strong spatial pattern was evident in the prevalence of ARI symptoms, after adjusting for maternal smoking and relevant control variables. The findings underscore the importance of designing exclusive public health intervention measures to prevent tobacco smoking within households, for example through awareness campaigns highlighting the adverse effect of maternal smoking on child health.

PMID: 19563695 [PubMed - indexed for MEDLINE]


Abstract

OBJECTIVE: We examined risk factors of smoking and the association between smoking and pregnancy-related and 6-month infant mortality in rural Nepal, where 30% women reported smoking during pregnancy.

DESIGN: Cross-sectional analysis of risk factors associated with smoking status and health consequences of smoking, using prospective data collected as part of a randomized community trial to examine the effect of maternal vitamin A or beta-carotene supplementation on maternal mortality.

SETTING: Rural, southeastern plains of Nepal.

SUBJECTS AND METHODS: A total of 17 767 women contributed at least one pregnancy during 3.5 y of the study. Data on cigarette or bidi (rolled tobacco) smoking were collected using a 7-day recall, twice during pregnancy. Associations between smoking status and maternal diet, morbidity profile, household socioeconomic status and serum concentration of retinol, carotenoids and tocopherols were examined. Further, relative risk (RR) and 95% confidence intervals (CI) were calculated to estimate supplement effects on pregnancy-related mortality, stratified by smoking status during pregnancy.

RESULTS: Smokers were more likely to be older, illiterate and poor compared to nonsmokers. Fruit and vegetable consumption among smokers and nonsmokers did not vary. However, smokers were more likely to consume meat/fish/eggs and less likely to consume milk than nonsmokers. They were also more likely to report symptoms of vaginal bleeding, edema, severe headache and convulsions during pregnancy relative to nonsmokers. Mortality per 100,000 pregnancies appeared to be higher among smokers than nonsmokers in the placebo group (915 vs 584; RR=1.57, 95% CI: 0.80-3.08), beta-Carotene supplementation reduced pregnancy-related mortality both among smokers (RR=0.31 95% CI: 0.11-0.89) and nonsmokers (RR=0.41, 95% CI: 0.19-0.89). Similar results obtained with vitamin A supplementation were not statistically significant. Infant mortality up to 6 months was approximately 30% higher among smokers compared to nonsmokers in the placebo group both before and after adjusting for confounding factors. Neither supplement given to women reduced infant mortality.

CONCLUSIONS: Cigarette smoking during pregnancy is associated with an increased risk of maternal and infant mortality in rural Nepal. beta-Carotene and to some extent vitamin A may reduce the risk of pregnancy-related mortality, but not infant mortality, among both smokers and nonsmokers.

PMID: 14749738 [PubMed - indexed for MEDLINE]

Abstract

The study was undertaken to assess the prevalence and patterns of tobacco use and also assess the factors affecting tobacco use among the female population of Dharan. A cross-sectional survey of a representative sample of 2,340 female participants aged 15 years and above was conducted in Dharan municipality in 2001. Cluster sampling with probability proportionate to size technique was used. Of the 2,340 subjects, 12.9% were cigarette smokers and 14.1% were smokeless tobacco users. The smoking habit had a significant relationship with the habit of tobacco chewing. About 50% of the smokers had been continuously smoking for more than 20 years. Smokers aged 50 years and above were more likely to smoke more than 10 cigarettes per day than those at the reproductive age (15-49 years). Health problems among females did not have any significant relationship with tobacco-chewing, but smokers were nearly twice as likely to suffer from any health problem than non-smokers. Gastrointestinal problems is the most common complaint among the tobacco users. An effective awareness programme is required to discourage the use of tobacco and encourage women to take regular health check-ups.

PMID: 15190814 [PubMed - indexed for MEDLINE]

1.8. General population


Abstract

BACKGROUND: In the 20th century, 100 million people across the globe lost their lives due to consumption of tobacco. Every year 15,000 deaths in Nepal are attributable to tobacco smoking and using other products of tobacco. This study aimed to establish the proportion and the social determinants of tobacco use among Nepalese men based on the Nepal Demographic and Health Survey (NDHS), 2011.

METHODS: This study used the NDHS 2011 data. The prevalence of cigarette smoking, other forms of tobacco 16 smoking and use of tobacco in any form is reported as a percentage (%). The significance of association of the statistically significant variables established using Chi-square test was further tested by using multiple logistic regression.

RESULTS: Of the 4121 participants, the prevalence of consuming any form of tobacco was 51.9% [95% confidence interval (CI) (49.6%- 54.3%)]; chewing/sniffing tobacco was 34.8% (95% CI: 32.4%- 37.3%) and tobacco smoking was 33.6% (95% CI 31.3%-36.0%).Men with no education [Odds Ratio (OR) 3.477; 95% CI (2.380-5.080)], from an older age group (36-49) [OR 2.399; 95% CI (1.858-3.096)] who were from a manual occupation [OR 1.538; 95% CI (1.188-1.985)], who were married[OR 1.938; 95% CI (1.552-2.420)], and who were from the Terai region [OR 1.351; 95% CI (1.083-1.684)] were more likely to consume tobacco. Men who watched television at least once a week [OR 0.642; 95% CI (0.504-0.819)] were less likely to consume tobacco.

CONCLUSIONS: The current study showed that over half of Nepalese men consume tobacco. There is an urgent need to fully implement Nepal's Tobacco Control and Regulation Act which will ban smoking in public places; enforced plain packaging and display of health warnings over 75% of the packaging, and has banned selling of tobacco products to those under 18 years of age. There is a need to increase the social unacceptability of tobacco in Nepal by raising awareness through different electronic and cultural media. Anti-tobacco campaigns should focus on those who are less educated, have manual occupations, are in poorer economic groups, and are from the Terai region of Nepal.

PMID: 24359118 [PubMed - indexed for MEDLINE] PMCID: PMC3880042


No abstract available

Abstract

Tobacco use is widely prevalent in different forms in Nepal. These habits are deeply rooted among different age groups and gender. There is no information available on all aspects of smokeless tobacco (SLT) use and its implications in Nepal. To review the types of SLT products available in Nepal, prevalence of SLT use, correlates of SLT use, SLT-related harm, and existing gaps in information and policy implications. This review is mainly based on information from literature, and some WHO and other documents. The prevalence of smokeless tobacco use is high, particularly among males and disadvantaged groups. SLT users have multiple habits of tobacco chewing, smoking and drinking. Despite SLT products being manufactured in the unorganized sector, they are also largely imported from India. People have easy access to various SLT products. There is a general lack of information on the health hazards of SLT use to the population. This calls for research on the issue. In order to succeed in reducing SLT use in Nepal, addressing the challenges of enforcing the Tobacco Control Act through a multisectoral approach and developing capacity of sectors other than health is of vital importance.

PMID: 23442398 [PubMed - indexed for MEDLINE]


Abstract

OBJECTIVES: Smokeless tobacco (SLT) is an addiction resulting in serious health problems including cancers. The social context around SLT use among South Asians was reviewed to help inform interventions for its prevention and cessation.

STUDY DESIGN: Systematic review

METHODS: Electronic databases were searched to identify studies examining the social context of SLT use. As heterogeneous qualitative, quantitative and mixed method studies were included, meta-analysis was not appropriate.

RESULTS: Of 428 studies identified, 17 were reviewed. These studies were conducted in India, Nepal, Pakistan and the UK between 1994 and 2009. SLT use among South Asians was culturally widely acceptable due to its association with socializing, sharing and family tradition (100% in Anwar et al.’s study). Other reasons for use were addiction, easy accessibility, low cost and lack of prohibitive legislation. SLT users had limited awareness of its association with oral cancer (29.3% in Ahmed et al.’s study); however, there was a distinct lack of knowledge regarding other health effects, such as cardiovascular disease (0.85%). Users attempted to quit (32.7% in Prabhu et al.’s study) but success was low (8.2%).

CONCLUSIONS: Cessation programmes for South Asians should address cultural acceptance, limited knowledge of health effects, inadequate legislation and controls, scarce social support and insufficient SLT cessation services.

PMID: 22809493 [PubMed - indexed for MEDLINE]


Abstract

BACKGROUND: Nearly four-fifths of estimated 1.1 million smokers live in low or middle-income countries. We aimed to provide national estimates for Nepal on tobacco use prevalence, its distribution across demographic, socio-economic and spatial variables and correlates of tobacco use.
METHODS: A secondary data analysis of 2006 Nepal Demographic and Health Survey (DHS) was done. A representative sample of 9,036 households was selected by two-stage stratified, probability proportional to size (PPS) technique. We constructed three outcome variables ‘tobacco smoke’, ‘tobacco chewer’ and ‘any tobacco use’ based on four questions about tobacco use that were asked in DHS questionnaires. Socio-economic, demographic and spatial predictor variables were used. We computed overall prevalence for ‘tobacco smoking’, ‘tobacco chewing’ and ‘any tobacco use’. i.e. point estimates of prevalence rates, 95% confidence intervals (CIs) after adjustment for strata and clustering at primary sampling unit (PSU) level. For correlates of tobacco use, we used multivariate analysis to calculate adjusted odds ratios (AORs) and their 95% CIs. A p-value < 0.05 was considered as significant.

RESULTS: Total number of households, eligible women and men interviewed was 8707, 10793 and 4397 respectively. The overall prevalence for ‘any tobacco use’, ‘tobacco smoking’ and ‘tobacco chewing’ were 30.3% (95% CI 28.9, 31.7), 20.7% (95% CI 19.5, 22.0) and 14.6% (95% CI 13.5, 15.7) respectively. Prevalence among men was significantly higher than women for ‘any tobacco use’ (56.5% versus 19.6%), ‘tobacco smoking’ (32.8% versus 15.8%) and ‘tobacco chewing’ (38.0% versus 5.0%). By multivariate analysis, older adults, men, less educated and those with lower wealth quintiles were more likely to be using all forms of tobacco. Divorced, separated, and widowed were more likely to smoke (OR 1.49, 95% CI 1.14, 1.94) and chew tobacco (OR 1.36, 95% CI 0.97, 1.93) as compared to those who were currently married. Prevalence of ‘tobacco chewing’ was higher in eastern region (19.7%) and terai/plains (16.2%). ‘Tobacco smoking’ and ‘any tobacco use’ were higher in rural areas, mid-western and far western and mountainous areas.

CONCLUSIONS: Prevalence of tobacco use is considerably high among Nepalese people. Demographic and socioeconomic determinants and spatial distribution should be considered while planning tobacco control interventions.


Abstract
Smokeless tobacco use is on the upswing in some parts of the world, including parts of SEAR. It is therefore important to monitor this problem and understand the possible consequences on public health. Material for this review was obtained from documents and data of the World Health Organization, co-authors, colleagues, and searches on key words in PubMed and on Google. Smokeless tobacco use in SEAR, as betel quid with tobacco, declined with increased marketing of cigarettes from the early twentieth century. Smokeless tobacco use began to increase in the 1970s in South Asia, with the marketing of new products made from areca nut and tobacco and convenient packaging. As a consequence, oral precancerous conditions and cancer incidence in young adults have increased significantly. Thailand’s successful policies in reducing betel quid use through school health education from the 1920s and in preventing imports of smokeless tobacco products from 1992 are worth emulating by many SEAR countries. India, the largest manufacturing country of smokeless tobacco in the Region, is considering ways to regulate its production. Best practices require the simultaneous control of smokeless and smoking forms of tobacco. Governments in SEAR would do well to adopt strong measures now to control this problem.

PMID: 22089688 [PubMed - indexed for MEDLINE]


(No abstract available)

PMID: 22089681 [PubMed - indexed for MEDLINE]


No abstract available
PMID:16400210[PubMed - indexed for MEDLINE]
2. Tobacco related Morbidity and Mortality


Abstract

Information on cancer patterns is an important basis for determining the priorities for cancer control in different countries worldwide. There is no reliable information about the incidence or pattern of cancer in Nepal and hence an attempt was made to assess the situation based on hospital data which is the only source in the western region of Nepal. Cancer cases diagnosed by all methods or treated in Manipal Teaching Hospital, affiliated to Manipal College of Medical Sciences, Pokhara, during 1st January 2003 to 30th May 2005 were used for the present study. A total of 957 cancer cases were identified with a male to female ratio of 1.1:1. The median age of male and female patients was 63 and 60 years, respectively. The proportion of microscopically confirmed cases, both from primary and metastatic sites was 87.5% and tobacco-related cancers constituted 48% of all cancers among males and 28% among females. For males the leading cancer sites were lung (22.2%), larynx (9.8%) and stomach (9%) and that for females was lung (20%), cervix (19.7%) and breast (7.8%). Among males, 33.1% of all cancers were in the respiratory system followed by digestive organ cancers (23.2%). Among females, 28.4% cancers were related to the reproductive system, 22.8% to the respiratory system and 14.1% to digestive organs. The cancer pattern revealed by the present study provides valuable leads to cancer epidemiology in Nepal, particularly in the western region, and provides useful information for health planning and future research.

PMID:17696728 [PubMed - indexed for MEDLINE]


Abstract

OBJECTIVE: We examined risk factors of smoking and the association between smoking and pregnancy-related and 6-month infant mortality in rural Nepal, where 30% women reported smoking during pregnancy.

DESIGN: Cross-sectional analysis of risk factors associated with smoking status and health consequences of smoking, using prospective data collected as part of a randomized community trial to examine the effect of maternal vitamin A or beta-carotene supplementation on maternal mortality.

SETTING: Rural, southeastern plains of Nepal.

SUBJECTS AND METHODS: A total of 17 767 women contributed at least one pregnancy during 3.5 y of the study. Data on cigarette or bidi (rolled tobacco) smoking were collected using a 7-day recall, twice during pregnancy. Associations between smoking status and maternal diet, morbidity profile, household socioeconomic status and serum concentration of retinol, carotenoids and tocopherols were examined. Further, relative risk (RR) and 95% confidence intervals (CI) were calculated to estimate supplement effects on pregnancy-related mortality, stratified by smoking status during pregnancy.

RESULTS: Smokers were more likely to be older, illiterate and poor compared to nonsmokers. Fruit and vegetable consumption among smokers and nonsmokers did not vary. However, smokers were more likely to consume meat/fish/eggs and less likely to consume milk than nonsmokers. They were also more likely to report symptoms of vaginal bleeding, edema, severe headache and convulsions during pregnancy relative to nonsmokers. Mortality per 100,000 pregnancies appeared to be higher among smokers than nonsmokers in the placebo group (915 vs 584, RR=1.57, 95% CI: 0.80-3.08). Beta-Carotene supplementation reduced pregnancy-related mortality both among smokers (RR=0.31 95% CI: 0.11-0.89) and nonsmokers (RR=0.41, 95% CI: 0.19-0.89). Similar results obtained with vitamin A supplementation were not statistically significant. Infant mortality up to 6 months was approximately 30% higher among smokers compared to nonsmokers in the placebo group both before and after adjusting for confounding factors. Neither supplement given to women reduced infant mortality.

CONCLUSIONS: Cigarette smoking during pregnancy is associated with an increased risk of maternal and infant mortality in rural Nepal. Beta-Carotene and to some extent vitamin A may reduce the risk of pregnancy-related mortality, but not infant mortality, among both smokers and nonsmokers.

PMID: 14749738 [PubMed - indexed for MEDLINE]
2.1. Cancers related to tobacco use


Abstract

Cigarette smoking is a popular method of tobacco consumption worldwide. In Nepal, tobacco used in various forms such as Beedi smoking, a most popular form in Terai region followed by cigarette smoking and use of various smokeless tobacco preparations in hilly and urban areas. The prevalence of tobacco use is considerably higher in rural areas than in urban areas, particularly in youth population. Males more consume tobacco products than females. The prevalence of tobacco products users is the highest (68.2%) in the high mountain region followed by the Terai region (42.4%) and mid hilly region (40.9%). In Nepal, chronic non-communicable diseases of respiratory, cardio-vascular and, nervous systems, including cancers of oral cavity, respiratory and digestive organs, as well as premature deaths cause around 42% mortality. Tobacco is the most common risk factor, which became the world’s leading killer, responsible for many cancers. Lung cancer is the commonest tobacco-attributed cancer in both genders, which is one of the common causes of death from cancers in Nepal. The major part of population in Nepal is not aware of risk factors leading to cancers and other diseases. Therefore, fight against tobacco use becomes a challenging, difficult and more complex because of socio-cultural and economical factors. Long-term plans with effective actions are necessary to control the tobacco use and prevent more tobacco related deaths saving huge preventable expenses. The purpose of this study is to aware the people about the prevalence of tobacco use in Nepal and inspire to join the battle against tobacco use.

2.1.1. Head and neck cancers


Abstract

Regional cancer epidemiology is an important basis for determining the priorities for cancer control in different countries worldwide. There is no reliable information about the pattern of head and neck cancer in western Nepal and hence an attempt was here made to evaluate the situation based on hospital data, which provide the only source in the western region of Nepal. A clinicopathological analysis of head and neck cancers treated between 2003 and 2006 in Manipal Teaching Hospital affiliated to Manipal College of Medical Sciences, Pokhara, Western Development Region, Nepal was performed. A total of 105 head and neck cancer cases were identified with a male to female ratio of 1.8:1. The median ages of male and female patients were 62 and 64 years, respectively. Ninety-seven (92.4%) of the cancer patients were suffering from carcinoma, three (2.9%) had blastoma, three (2.9%) had sarcoma, and two (1.9%) had lymphoma. The majority (61.9%) of carcinoma cases were squamous cell carcinoma followed by anaplastic carcinoma (7.2%). Of the carcinoma cases, the most common site of primary lesion was larynx (19.6%), followed by the thyroid (14.4%), the tongue and hypopharynx with 10.3% cases each. Comparative analysis among males and females did not reveal any sex difference in type of head and neck cancers. The head and neck cancer pattern revealed by the present study provides valuable leads to cancer epidemiology in western Nepal and useful information for health planning and cancer control, and future research in western Nepal.

PMID:23464403[PubMed - in process]

2.1.2. Thoracic cancers


Abstract

BACKGROUND: Often, lung cancer is diagnosed at terminal stages. Poor awareness about the symptoms or risk factors of lung cancer among medics may be one of the factors for delayed diagnosis.

OBJECTIVE: We explored the knowledge of medical students and their behavior with the patients of lung cancer.

METHOD: Qualitative and quantitative approaches were used for data collection from 153 medical student of Kathmandu University School of Medical Sciences from December 2011 to May 2012.

RESULTS: Among the results, eighty-nine students had over 80% knowledge of the 14 cancer warning signs, among them 83% knew the nine risk factors for lung cancer. Twenty-three students told lung cancer can be
hereditary. Sixty five percent of all participants believed that lung cancer can be detected at early stage; of them 81% told that it can be treated. About 24% of the total students were current or exsmokers and about half of them believed that lung cancer does not occur in light smokers. Only 10% have heard of Framework Convention on Tobacco Control in Nepal.

CONCLUSION: Study finds that all medical students who know about any cancers may not necessarily have knowledge about lung cancers. Their perception about the cause of lung cancer may be influenced by their smoking behavior and there was little knowledge of public health measures for smoking control. Awareness about national policies needs to be increased.

PMID:23434965[PubMed - indexed for MEDLINE]


Abstract

OBJECTIVE: The objective of this study was to evaluate the awareness and assessment of lung cancer risk factors with respect to sociodemographic factors among residents of Pokhara Valley, Nepal.

MATERIALS AND METHODS: A cross sectional study was carried out in 240 residents between 01 September 2009 and 31 March 2010 using a structured questionnaire containing details of lung cancer risk factors viz., smoking, environmental pollution, insecticide exposure, hereditary factors, protective diet and socio demographic details. Descriptive statistics and testing of hypothesis were used for the analysis using EPI INFO and SPSS 16 software.

RESULTS: In the 240 subjects, the mean age was 33.4 ± SD 11.4 years, with a slight male preponderance in gender distribution (57.5% males vs. 42.5% females). 32.5% out of the study population were smokers (43.5% of males and 17.6% of females). Relationships could be established between gender and smoking (p=0.001, odds ratio=3.58), stoppage or restriction of tobacco use (p=0.001), smoking by mother during subjects' childhood as a motivation to develop smoking habit (p=0.001), tobacco use as a cause of cancer (p=0.001), cancer as the most dreaded disease (p=0.009). Positive relationships were found between educational level and risk factors viz. smoking by mother during subjects' childhood (p= 0.03), wood or coal exposure causing lung cancer (p=0.0001), protection from lung cancer by consumption of green and yellow vegetables (p=0.0001) and insecticide exposure as a cause of lung cancer (p=0.0001). No strong relationship could be established between gender and outdoor pollution (p=0.721), insecticide exposure (p=0.219), protective diet (p=0.979) and hereditary factors (p=0.273).

CONCLUSION: Awareness of lung cancer by tobacco use and other risk factors varied with socioeconomic status amongst residents of Pokhara. Despite their awareness of smoking as a risk factor for lung cancer, most of them still continue to smoke. Government and NGOs should gear up a population based counselling programme in this community.

PMID:21338234[PubMed - indexed for MEDLINE]


Abstract

INTRODUCTION: Bronchogenic carcinoma is the most common cancer in the world. It can present in many ways. Accurate diagnosis and categorization into different types is important because of its effect on prognosis and management. We conducted this study to find out the frequency of various histological types of bronchogenic carcinoma and correlate with their clinicopathologic profile.

METHODS: This is a retrospective study conducted in 174 histopathologically proven cases of bronchogenic carcinoma that were referred from different parts of the country to a private hospital in Kathmandu over a period of 4 years.

RESULTS: The mean age of the patients developing bronchogenic carcinoma was 64 years. Squamous cell carcinoma was the commonest histologic subtype followed by small cell carcinoma. Adenocarcinoma was more common in females. Clinical history was available in 133 cases. Among them, almost all patients had a history of
smoking, the average number of pack years being 39.99. Most of the patients consulted doctor for chief complaint of cough and shortness of breath, the average duration of symptoms being 117.53 days.

CONCLUSIONS: The lung cancer must be ruled out in all patients who have persistent signs and symptoms of pulmonary disease with a history of smoking.

PMID:21485592[PubMed - indexed for MEDLINE]

2.1.3. Other cancers


Abstract

BACKGROUND: Urinary bladder carcinoma is common urological malignancy. Although epidemiological evidence favors role of occupational exposure to chemical carcinogen as the aetiological factor of bladder carcinoma, many cases arise with no obvious occupational exposure to chemical carcinogen. Tobacco and cigarette smoking is common in both rural and urban areas of Nepal.

OBJECTIVE: The objective of this study was to determine the impact of smoking and age in urinary bladder carcinoma with related clinicopathological correlations.

METHOD: A total of 56 (44 males and 12 females) cases of urinary bladder cancer treated at Dhalikhel Hospital, Kathmandu University Teaching Hospital during time period of January 2004 to December 2013 were included in the study. Data of patients with Urinary bladder cancer were obtained from hospital records and evaluated for age, sex, history of smoking, clinical presentations, cystoscopic findings and histopathological characteristics.

RESULTS: Out of 56 cases, 51 (91.1%) of the patients had hematuria. History of smoking was found in 44 patients. Smoking was found much higher in males (88%) than females (41.66%). Transitional cell carcinoma (TCC) was the most common histological variety, which was seen in 51 (91.07%) patients. The significant impact of smoking was found in terms of grade of TCC.

CONCLUSION: The incidence of bladder carcinoma is higher in male and TCC is the most common variety of Urinary bladder malignancy. History of smoking correlated with grade.

PMID:24899322[PubMed - indexed for MEDLINE]

2.2. Non-cancerous diseases

2.2.1. Tuberculosis


Abstract

SETTING: Tuberculosis (TB) treatment centres in Eastern Nepal.

OBJECTIVE: To determine smoking cessation rates among TB patients advised to quit.

DESIGN: One intervention and one control centre were studied. At the intervention centre, brief advice about smoking and cessation was given at the start of anti-tuberculosis treatment, and repeated 2 and 5 months later. After 6 months of standard treatment, patients were asked about quitting. Expired air carbon monoxide (CO) was measured in those claiming 6 months of abstinence.

RESULTS: None of the 51 controls achieved 6 months of abstinence, whereas 77 (39%) of the 195 in the intervention group claimed at least 6 months of abstinence. All claims were verified by CO measurement in expired air (95%CI 31.4-47.6, P < 0.0001 for the difference in smoking cessation).
CONCLUSION: Brief advice on smoking cessation to patients starting anti-tuberculosis treatment in the National Tuberculosis Programme (NTP) setting in Eastern Nepal led to 39% quitting for at least 6 months. Our results should encourage randomised trials in smokers with TB in Nepal: if substantiated, smoking cessation advice should become a mandatory component of the NTP.

PMID:25517808[PubMed - in process]


Abstract

Tuberculosis is transmitted commonly by droplet nuclei and facilitated by weak immune system. Lowered immunity may be associated with cigarette smoking, tobacco chewing and alcohol consumption. The co-relationship between these all factors to TB should be explored. This study aims to detect the hidden household contacts (HC) cases early and to examine the relative contribution of tobacco and alcohol use to the risk of TB. Across-sectional study was in Dharan among HCs. From June 2009 to May 2010, 184 index cases with sputum smear positive for AFB and their 802 HCs were included. Three sputum specimens were collected from each HCs and examined microscopically for AFB detection. AFB were detected in sputum of 13 (1.6%) HCs. The association between habits (alcohol user and smoking) and TB was found except with chewing tobacco user (P > 0.05). The risk of contact TB was 4 and 8 times greater in smoker (OR = 3.94 95% CI = 1.26-12.26, P < 0.05) and alcoholic (OR = 8.23 95% CI = 2.71-24.98, P < 0.05) HCs respectively. This study has revealed smoking and alcohols as the risk factors for tuberculosis. Effective campaign to discourage use of alcohol and tobacco, and awareness programme about the mode of transmission of TB are needed in community.

PMID:24696932[PubMed - indexed for MEDLINE]


Abstract

**SETTING:** Kathmandu, Nepal, which has 7% of the national population and 18% of the tuberculosis (TB) burden.

**OBJECTIVES:** To determine the association of smoking with total delay among new sputum smear-positive TB patients.

**METHODS:** Direct interviews were conducted among 605 TB patients registered in 37 randomly selected clinics within 30 days of initiating anti-tuberculosis treatment using a semi-structured questionnaire. Total delay was calculated from the date of the first reported symptom to the commencement of treatment. Logistic regression analyses were performed to determine the factors associated with total delay.

**RESULTS:** Of the 605 TB patients interviewed, 271 (44.8%) were current smokers, 33 (5.5%) were ex-smokers and 301 (49.8%) were never smokers. The median total delay was 103 days (current smokers 133 days, ex-smoker 103 days and never smokers 80 days). Longer delay was more common among current smokers (aOR 2.03, 95%CI 1.24-3.31). Covariates with significantly more delay were female sex, lower levels of education and higher degrees of sputum smear positivity.

**CONCLUSION:** Total delay was unacceptably longer in current smokers. Anti-smoking interventions are needed as an integral part of the TB programme to address this problem.

PMID: 22507563 [PubMed - indexed for MEDLINE]

Abstract

INTRODUCTION: Tuberculosis is the most widespread infectious disease in Nepal and poses a serious threat to the health and development of the country. Incidences of drug resistant tuberculosis in Nepal are increasing and this tuberculosis a major threat to successfully controlling tuberculosis.

OBJECTIVE: The general objective of the study was to assess the risk factors of multi-drug resistant tuberculosis among the patients attending the National Tuberculosis Centre, Bhaktpur Nepal.

METHODS: An observational study/ case-control study with a total number of 55 multi-drug resistant tuberculosis cases and 55 controls. The study was conducted among the patient attending in the National Tuberculosis Centre, Bhaktpur Nepal for six months, between May-October 2010. The collected data was analysed in SPSS 11.5 version. The association between categorical variables were analysed by chi-square tests, OR and their 95% CI were measured.

RESULTS: The total number of patients used for the study was 110, of which among them 55 were cases and 55 were controls. Our study revealed that there were significant associations between history of prior TB MDR-TB OR = 2.799 (95 % CI 1.159 to 6.667) (p = 0.020); smoking habit OR = 2.350 and (95%CI 1.071 to 5.159) (p = 0.032); social stigma social stigma OR 2.655 (95%CI r 1.071 to 5.159) (p = 0.013); knowledge on MDR-TB OR = 9.643 (95% CI 3.339 to 27.846) (p less than 0.001) and knowledge on DOTS Plus OR = 16.714 (95% CI is ranging from 4.656 to 60.008) (p less than 0.001). However, there was no association found between alcohol drinking habits and ventilation in the room.

CONCLUSION: Our study revealed that there were significant associations between history of prior tuberculosis, smoking habit social stigma social stigma, knowledge on multi-drug resistant tuberculosis and knowledge on DOTS Plus with multi-drug resistant tuberculosis However there was no association between alcohol drinking habit and ventilation in room with multi-drug resistant tuberculosis.

PMID: 22610768 [PubMed - indexed for MEDLINE]


Abstract

AIMS AND OBJECTIVES: The aim of the study was to describe the clinical spectrum of the patients presenting with bronchiectasis at the referral clinic for the respiratory diseases in eastern Nepal. An attempt would also be made to provide an overview of factors responsible for poor lung health in the community.

MATERIALS AND METHODS: This is a retrospective observational study conducted at the Adult chest clinic of the department of internal medicine at the B.P Koirala Institute of Health Sciences (BPKIHS), Dharan Nepal. The medical records of all the consecutive patients presenting with the diagnosis of bronchiectasis in the adult chest clinic of department of medicine from January 2003 to December 2004 (two years) were reviewed for patient characteristics (age, gender, place of residence, occupation, smoking history, exposure to indoor air pollution due to use of biomass smoke, past and family history related to tuberculosis, and clinical characteristics such as clinical features and duration of symptoms.

RESULTS: During the study period of two years, 100 patients presented with the diagnosis of bronchiectasis, 80 (80%) patients were smokers and 50 (50%) patients had history of significant exposure to indoor air pollution. Abnormal Chest X-ray was seen in 85(85%) patients. Post tubercular bronchiectasis was the most common etiological diagnosis Smoking status and exposure to indoor air pollution were important determinant for hospitalisation in patients with post tubercular bronchiectasis.

CONCLUSIONS: In Nepal bronchiectasis remains one of the important chronic respiratory diseases, post tubercular variety being the commonest type. Tuberculosis, tobacco smoking and exposure to indoor air pollution contributes towards higher morbidity of this diseases.

PMID:18769086[PubMed - indexed for MEDLINE]
2.2.2. Cardiovascular diseases


Abstract

BACKGROUND: Cardiovascular disease (CVD) is emerging as a public health menace among low and middle income countries. It has particularly affected the poorest. However, there is paucity of information about CVD risk factors profile among Nepalese rural communities where the majority of people live in poverty. Therefore, this study aimed to identify the prevalence of cardiovascular health risk behaviors in an outback community of Nepal.

METHODS: We conducted a descriptive cross-sectional study in Tinkanya Village Development Committee (VDC), Sindhuli between January and March, 2014. Total 406 participants of age 20 to 50 years were selected randomly. Data were collected using WHO-NCD STEPwise approach questionnaires and analyzed with SPSS V.16.0 and R i386 2.15.3 software.

RESULT: The mean age of participants was 36.2 ± 9 years. Majority of participants (76.3%) were from lower socio-economic class, Adibasi/Janajati (63.1%), and without formal schooling (46.3%). Smoking was present in 28.6%, alcohol consumption in 47.8%, insufficient fruits and vegetables intake in 96.6%, insufficient physical activity in 48.8%; 25.6% had high waist circumference, 37.4% had overweight and obesity. Average daily salt intake per capita was 14.4 grams ±4.89 grams. Hypertension was detected in 12.3%. It had an inverse relationship with education and socio-economic status. In binary logistic regression analysis, age, smoking, body mass index (BMI) and daily salt intake were identified as significant predictors of hypertension.

CONCLUSION: Present study showed high prevalence of smoking, alcohol consumption, insufficient fruit and vegetable intake, daily salt intake, overweight and obesity and hypertension among remote rural population suggesting higher risk for developing CVD in future. Nepalese rural communities, therefore, are in need of population-wide comprehensive intervention approaches for reducing CVD health risk behaviors.

PMID:25066117[PubMed - indexed for MEDLINE] PMCID:PMC4115072


Abstract

Background Coronary artery disease (CAD) is associated with the numbers of risk factors causing coronary atherosclerosis. Coronary artery stenosis is mostly caused by coronary atherosclerosis. Objective This study aims to analyze the association between coronary artery stenosis and cardiovascular risk factors. Methods An observational study was conducted among CAD patients. The diagnostic coronary angiogram was performed from femoral approach using standard catheters and techniques to find out any abnormalities. Result A total 73 patients (44 male and 29 female) with coronary artery disease undergoing diagnostic coronary angiography was included with the documented cardiovascular risk factors. The coronary stenosis was found in 40 patients on the basis of stenosis grading. Among the established cardiovascular risk factors, sex, diabetes mellitus and smokers show are significantly associated with coronary stenosis among CAD patients. The present study shows the significant association of coronary stenosis among male CAD patients OR (2.47; CI 0.94 - 6.48, p <0.05) and similar association has been observed in diabetes mellitus (OR 3.32; CI 1.12 - 9.84, p <0.05) and smoking (OR 4.10; CI 1.45 - 11.61, p <0.01). Conclusion The prevalence of CAD is increased with numbers of presence of cardiovascular risk factors. Male gender, diabetes mellitus and smoking are significantly associated with coronary stenosis among CAD patients. However, hypertension and dyslipidemia are comparable between coronary stenosis and no significant stenosis group.

PMID:25552220[PubMed - in process]

Abstract

BACKGROUND: Nepal currently faces an increasing burden of cardiovascular disease (CVD). Earlier studies on health literacy and the behavior dimension of cardiovascular health reported a substantial gap between knowledge and practice.

OBJECTIVE: This qualitative study aimed to deepen understanding of the community perspective on cardiovascular health from the patients' viewpoint.

DESIGN: We conducted in-depth interviews (IDIs) with 13 individuals with confirmed heart disease, hypertension, or diabetes mellitus. All participants provided verbal consent. We used an IDI guide to ask respondents about their perception and experiences with CVD, particularly regarding causation and preventability. We manually applied qualitative content analysis to evaluate the data and grouped similar content into categories and subcategories.

RESULTS: Respondents perceived dietary factors, particularly consumption of salty, fatty, and oily food, as the main determinants of CVD. Similarly, our respondents unanimously linked smoking, alcohol intake, and high blood pressure with cardiac ailments but reported mixed opinion regarding the causal role of body weight and physical inactivity. Although depressed and stressed at the time of diagnosis, respondents learned to handle their situation better over time. Despite good family support for health care, the financial burden of disease was a major issue. All respondents understood the importance of lifestyle modification and relied upon health professionals for information and motivation. Respondents remarked that community awareness of CVD was inadequate and that medical doctors or trained local people should help increase awareness.

CONCLUSIONS: This study provided insight into the perceptions of patients regarding CVD. Respondents embraced the importance of lifestyle modification only after receiving their diagnosis. Although better health care is important in terms of aiding patients to better understand and cope with their disease, interventions should be tailored to improve the community's cardiovascular health literacy and preventive practices.

PMID: 24802386 [PubMed - indexed for MEDLINE] PMCID: PMC4007028


Abstract

BACKGROUND: Stroke mortality rate indicates a measure in hospital quality care. Most of the available data are from developed countries and are for late mortality. Only few studies on 7-day fatality, a recently implemented indicator of early stoke mortality, are reported. We attempted to identify the predictors of clinical outcome by 7th day in acute ischemic stroke.

METHODS: This descriptive study included 100 consecutive cases of acute ischemic stroke admitted to Neurology center of a teaching hospital in Chitwan, Nepal. Common risk factors were identified. The cases were classified as per TOAST classification and severity at admission assessed using National Institutes of Health Stroke Scale. Univariate and multivariate analysis was used to analyze the data.

RESULTS: Thirteen percent patients expired by 7th day. On univariate analysis severity of stroke, fever, atrial fibrillation, hypertension at admission and early neurological deterioration were related to early 7-day mortality whereas age, gender, smoking, diabetes mellitus, coronary artery disease, early onset seizures, dyslipidemiaa, and hematocrit were unrelated to early mortality. Multivariate analysis showed that only NIHSS score was significantly correlated with early mortality.

CONCLUSIONS: A mortality rate of 13 percent was noted by 7th day. A positive association was noted with stroke severity, early neurological deterioration, arterial fibrillation, hypertension and fever at onset.

PMID: 25574982 [PubMed - in process]

Abstract

Heart disease is the leading cause of death globally. Prevention is the most effective way of combating its epidemic in the resource poor nations. Knowledge on preventive measures of heart diseases has been identified as a prerequisite for change in behavior. This study was conducted with the purpose of identifying the knowledge on heart disease and its prevention among the adults population residing in Dadhikot VDC of Bhaktapur district by interviewing house to house survey. A total of 405 respondents who met the eligible criteria were systematically sampled and interviewed face to face for the study. A pretested Nepali version semi-structured interview schedule was used to collect data from adults. The duration of the study was one month i.e. June, 2011. Among total respondents, 57.8 percent had adequate knowledge on heart disease. Only less than half (46.9%) knew age as non-modifiable risk factor for heart disease followed by hereditary (39.8%) and sex (13.8%). Regarding modifiable risk factors, the most cited response was fatty food consumption (72.6%) followed by smoking (70.4%), stress (63.7%), physical inactivity (61.7%), hypertension (59%), obesity (58.8%), high cholesterol diet (36.5%) and diabetes (30.1%). Most of the respondents (57.8%) knew dyspnea during exertion as symptom of heart disease followed by chest pain (24%). Majority of respondents (80.7%) cited decreasing fatty diet as preventive measure of heart disease following daily exercise (75.6%), eating vegetables and fruits (71.6%), keeping blood pressure under control (59%) and keeping diabetes under control (33.8%) respectively. Knowledge was significantly associated with age, gender, education level and family history of heart disease.

Conclusion: The findings concluded that significant percentage (42.2%) of respondents had inadequate knowledge on heart disease. The findings also highlighted the lack of knowledge on high cholesterol diet and diabetes as modifiable risk factors for heart disease i.e. 36.5% and 30.1% respectively. So it is recommended that awareness raising programs could be beneficial on prevention of heart disease is correcting in the deficient areas of knowledge regarding preventive measures of heart disease.


Abstract

Based on disability-adjusted life years, stroke is one of the major causes of death and is among the top five diseases in Nepal. Despite this fact, information on the prevalence, morbidity, and mortality of stroke in Nepal is limited to urban areas, with no official reports published on the epidemiology of stroke throughout the country. The mean age of stroke patients in Nepal is between 59 and 62 years, with males affected more frequently. Hypertension, cigarette smoking, alcohol consumption, and diabetes are the main predisposing factors for stroke, and ischemic stroke is more common (63%) than hemorrhagic stroke (37%). Because of a lack of facilities and specialists, most stroke patients, especially in the rural areas, seek traditional healers to treat their conditions. More governmental and non-governmental organizations should be involved in improving facilities and implementing prevention strategies.

PMID:22691158[PubMed - indexed for MEDLINE]


Abstract

BACKGROUND: Stroke is usually end result of predisposing conditions that originated years before the ictus. Identification of its modifiable risk factors can help in planning preventive strategies.

OBJECTIVE: To study the risk factors of stroke in adult patients.

METHODS: A hospital based prospective cross sectional study was carried out in 160 stroke patients admitted in Manipal Teaching Hospital, Pokhara from November 2007-October 2010. Diagnosis of stroke was confirmed by CT scan of brain. Patients were then investigated for presence of conventional risk factors. The data was statistically analysed using Epi-Info.

RESULTS: The mean age of stroke patients was 65.98 years +/- 10.69 with 126 (78.8%) of patients belonging to age group = 60 years. It afflicted higher percentage of males 104 (65%) than females 56 (35%). Analysis of
stroke subtypes showed preponderance of haemorrhagic stroke in 85 (53.1%) as against infarction in 75 (46.9%) of cases. Other conventional modifiable risk factors were seen as follows: hypertension 98 (61.2 %), cigarette smoking 95 (59.4%), alcohol use 43 (26.9%), left ventricular hypertrophy 44 (27.5%), atrial fibrillation 37(23%), elevated triglyceride 37(23%), diabetes mellitus 15 (9.3%) and elevated total cholesterol 12 (7.5%). Multiple risk factors (=2) were seen in 122 (76.5 %) cases.

CONCLUSIONS: The maximum occurrence of stroke was seen in patients > 60 years. Overall male preponderance and higher occurrence of haemorrhagic stroke was seen in our study. Significant risk factors in order of descending order were hypertension, cigarette smoking, left ventricular hypertrophy, alcohol use, atrial fibrillation and elevated triglycerides.

PMID:22710531[PubMed - indexed for MEDLINE]


Abstract

INTRODUCTION: Coronary artery disease is a major cause of morbidity and mortality in Nepal, however, there are very few published reports of prevalence of various risk factors for coronary artery disease in the community from Nepal.

METHOD: We evaluated 140 adult subjects by simple randomization from all wards in the community in Dharan, a small city located in the foothills in eastern Nepal. After exclusion of subjects with insufficient data, 119 subjects were included for the final analysis. Age ranged from 35 to 86 (mean 54.1 + 10.5) years and there were 63 males and 56 females. Various parameters which were studied included :history of diabetes mellitus, hypertension, coronary artery disease, smoking, hereditary history, family history, measurement of blood pressure, anthropometric parameters such as body mass index and waist hip ratio and biochemical parameters such as random blood sugar and serum cholesterol.

RESULTS: The prevalence of various risk factors for coronary artery disease was found to be: hypertension 42 (35.3%), diabetes mellitus--19 (15.9%), history of current smoking--46 (38.7%), hypercholesterolemia--15 (12.6%), sedentary life style 56 (47.1%), body mass index>25 kg/m2--40 (33.6%) and central obesity 50 (42.1%). Approximately one third of the subjects had more than one risk factor.

CONCLUSIONS: The study highlights prevalence of various risk factors for coronary artery disease in the community. Since majority of the risk factors are modifiable, timely intervention can help in reducing morbidity and mortality due to this disease.

PMID:21751607[PubMed - indexed for MEDLINE]


Abstract

BACKGROUND: Bronchial asthma is one of the most common illnesses in children. Factors influencing development of asthma have not been studied in rural population.

MATERIALS AND METHODS: Two thousand school-going children from three schools of Sonapur VDC, Sunsari in the surrounding of industries were screened for the presence of symptoms of asthma using a questionnaire suggested by International Study of Asthma and Allergy in Children (ISSAC).

RESULTS: One hundred twenty children were identified with symptoms of bronchial asthma. For each child with asthma two age and sex matched non-asthmatic control were selected from the study population. History, clinical examination and in-depth interview were carried out for all cases and controls. Factors associated with presence of symptoms of asthma on multivariate analysis were: passive smoking (OR 3.33, 95% CI 1.85-7.65), pets at home (OR 5.5, 95% CI 1.04-29.15), and absence of windows in living rooms (OR 4.03, 95% CI 1.17-13.79). Factors such as family history of asthma, history of worm infestation, fuel used for cooking, location of kitchen and food allergy were not significant in statistical analysis.
CONCLUSION: Thus, passive smoking, inadequate ventilation and domestic animals and pets (dogs and cats) at home are significant risk factors associated with presence of symptoms of asthma in these children.

PMID:18604079[PubMed - indexed for MEDLINE]

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Abstract

Stroke is a major public health burden worldwide and is responsible for a large proportion of disability; and ranks third in the causation of morbidity and mortality. This disease although regarded as a disease of old age, it is not uncommon in younger population in developing countries. A retrospective study of cerebro-vascular accidents (stroke) managed at Department of Medicine, Nepal Medical College Teaching Hospital during the period of 1st April 2000 to 31st March 2005 was done to study demographics and risk factors. Cases of TIA were not included in the final analysis of the data due to uncertainty of diagnosis and lack of imaging (CT scan). The collected data was analyzed using data analysis software SPSS (version 12). We identified 72 cases of stroke excluding TIA. The mean age at which patients in this study experienced their first ever stroke was 61.7 yrs (SD 14.9 yrs). The commonest presenting complaints in our study population were weakness of limbs (90.3%), slurring of speech (33.3%), altered mental status (29.8%), deviation of angle of mouth and headache (22.2%) each and urinary incontinence (13.9%). Vomiting, dizziness, fever, personality changes, seizure, tingling sensation of limbs were uncommon clinical presentation and were present in 15.28% of cases. Risk factors were smoking (58.3%), hypertension (47.2%), alcohol (41.4%), atrial fibrillation (12.5%) and diabetes mellitus (11.1%). To conclude, stroke in countries like Nepal is a public health problem. The clinical presentations and risk factors are in agreement with other studies. The low mean age of stroke patient reflects demographic feature of this region.

PMID:17357648[PubMed - indexed for MEDLINE]

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Abstract

Stroke is a major public health burden worldwide. Prevention programme are essential to reduce the incidence of stroke and to prevent the all but inevitable stroke epidemic, which will hit our population (developing countries) hard as our population age and adopt lifestyle of the more developed countries. In this study we have tried to find the clinical characteristics of the stroke patients admitted in NMCTH and the commonest risk factors and its magnitude in our population. In these retrospective clinical case series study, we included the cases which were admitted in NMCTH over the past 2 years (from 1st April 2003 to 31st March 2005). All these patients were confirmed cases of stroke (CT scan was done in all these cases). Clinical profiles of all these patients were studied and analyzed using SPSS 11.0 version software. Seventy two patients were diagnosed as having cerebrovascular accident. The mean age of the patients having stroke in our study was 61 years. The commonest symptom was unable to move one side of the body (90.0%), other common symptoms were slurring of speech (33.0%), loss of consciousness (29.0%), headache (23.0%) and deviation of mouth (22.0%). 70 patients (97.0%) had or of 3 or more than 3 symptoms (i.e. multiple symptoms). Smoking (61.0%), hypertension (60.0%) and atrial fibrillation (8.0%) were the commonest modifiable risk factors, while increased age (mean 61 years) was the commonest nonmodifiable risk factor. Ischemic stroke (68.0%) was common than hemorrhagic (32.0%) stroke. In this study we found that smoking and hypertension was the commonest risk factor in our study group. Atrial fibrillation (8.0%) and diabetes mellitus (8.0%) were among the less common risk factors, whereas alcoholism and hypercholesterolemia were negligible in our study population. Multiple clinical features are common with unable to move the one side of the body being the commonest. The commonest form of stroke detected in our study group was ischemic type which is comparable to the study done in the past. Despite of these findings a bigger epidemiological study is needed to generalize this view over our community.

PMID:17203825[PubMed - indexed for MEDLINE]

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Abstract

AIM: Stroke is a frequent cause of death and disability in elderly patients. This study was carried out to establish the pattern of various types of cerebrovascular accident (CVA) in eastern Nepal and to correlate the clinical data and radiological findings in cases of stroke.

MATERIALS AND METHODS: All the patients clinically diagnosed as stroke and referred to the radiology department for Computed tomography (CT) of the brain over a period of 1 year were included.

RESULTS: There were 150 patients with stroke (104 males and 46 females), aged 7 to 91 years in which infarction (58%) was more common than haemorrhage (42%) in both group of age (< or = 40 years and > 40 years). Smoking was the commonest risk factor noted in 40.66% cases followed by hypertension (40%). Excessive meat consumption (more than 4 times a week) was seen in 69.1% cases. In early Middle Cerebral Artery (MCA) territory infarction presenting within six hours of onset, positive CT findings were seen in 40% cases among which, obscuration of the lentiform nuclei was diagnostic.

CONCLUSION: In this part of Nepal, infarction is more common than haemorrhage as the cause of stroke and in contrary to western population; hemorrhagic stroke constitutes a significantly higher proportion of stroke. Smoking is the commonest risk factor followed by hypertension and it is also seen in combination with alcohol in many cases. Excessive meat consumption could be an additional risk factor for stroke in this part of Nepal. In younger age group (< or = 40 years), haemorrhage is more common than infarction and alcohol consumption is the commonest risk factor.

PMID:18603891[PubMed - indexed for MEDLINE]

2.2.3. Diabetes


Abstract

BACKGROUND: Duration of diabetes, poor control, age of the patient, frequent hypoglycemia, hypercholesterolemia, over-weight, smoking, alcohol, renal failure and pregnancy have all been suggested as factors which may influence the onset of diabetic retinopathy. However, there are cases without retinopathy in spite of duration of 30 to 40 years of diabetes and presence of one or other above mentioned risk factors, suggesting role of local factors to prevent angiopathy. Our study aims to assess whether tessellated fundus is a protective factor for diabetic retinopathy.

METHODS: This was hospital based descriptive study. The patients included in the study were 40 years and above having diabetes for 10 years and beyond. Diabetic retinopathy was graded following Early treatment Diabetic retinopathy Study.

RESULTS: Tessellated fundus was negatively associated with diabetic retinopathy (OR 0.49 with 95% confidence interval 0.21-1.11) and maculopathy (OR 0.43 with 95% confidence interval 0.15-1.3). Age 40-50 years (OR 0.67 with 95% confidence interval 0.24-1.83), female gender (OR 0.71 with confidence interval 0.31-1.61), HbA1c <6.5 (OR 3.6 with confidence interval 0.99-1.31) and duration 10-15 years of onset of diabetes (OR 0.58 with confidence interval 0.22-1.37) was negatively associated with diabetic retinopathy in tessellated fundus. Age 40-50 years (OR 2.12 with confidence interval 0.43-10.5), female gender (OR 2.51 with confidence interval 0.38-10.88), HbA1c<6.5 (OR 3.12 with confidence interval 0.59-16.58) and duration 10-15 years of onset of diabetes (OR 1.5 with confidence interval 0.1-18.54) was positively associated with retinopathy in non-tessellated fundus.

CONCLUSIONS: Tessellated fundus was observed as decreased risk for the development of diabetic retinopathy and maculopathy.

PMID:25574985[PubMed - in process]

Abstract

Patients with diabetes mellitus have 2 to 4 times increased risk for cardiovascular disease than non-diabetic patients. However this excess risk is not fully explained by the traditional cardiovascular risk factors (Hypertension, Hypercholesterolaemia, Smoking and Obesity) which are also associated with diabetes. Fibrinogen has been identified as an independent risk factor for cardiovascular disease and it is associated with traditional cardiovascular risk factors. This is a descriptive analytical cross-sectional study carried out in Tribhuvan University Teaching Hospital (TUTH) medical outpatient department and Medical ward from June 2005 to June 2006. A total of 120 consecutive patients were enrolled; 30 patients having Diabetes. Next 30 patients having both diabetes and coronary artery disease. Thirty patients having only coronary artery disease but no diabetes. And 30 patients (control) not having both diabetes and coronary artery disease. Fibrinogen was found to be significantly higher in patients with diabetes than control. Fibrinogen was significantly higher in diabetic patients with coronary artery disease than those patients who had only diabetes or coronary artery disease (p value<0.01).

PMID:20677607[PubMed - indexed for MEDLINE]

2.2.4. Respiratory


Abstract

BACKGROUND: Worldwide, children are more heavily exposed to passive smoking than any other age group where majority of these occur in child’s house. Children's passive smoking and risk of developing respiratory diseases has been well established in several studies. However, such studies are limited in Nepal. Therefore, the objective of this study was to determine association between household passive smoking and acute respiratory infection among under five children attending Kanti Children's Hospital.

METHODS: A descriptive, cross-sectional study using quantitative method was carried out in Kanti Children's Hospital. Data was collected by face-to-face interview from 198 parents. Bivariate and multivariate analyses were performed to see association between household passive smoking and acute respiratory infection.

RESULTS: Among 198 children, 79(39.9%) were passive smokers. Among the total passive smokers, 31(39.2%) were exposed to paternal smoking, 18(22.8%) to parental smoking, 18(22.8%) to other member's smoking and 12(15.2%) to maternal smoking. Among 36 daily passive smokers, 18(50.0%) were exposed to high amount and 18(50.0%) to low amount of passive smoking. Household passive smoking had a slight risk of developing acute respiratory infection where adjusted odds ratio was 1.35; however it was not statistically significant.

CONCLUSIONS: Children exposed to passive smoking had a slight risk of developing acute respiratory infection than non-passive smokers however, it was not statistically significant.


Abstract

BACKGROUND: The purpose of this study was to analyze the distribution of chronic obstructive pulmonary disease (COPD) in terms of time, place, and person among inpatients at the Mid Western Regional Hospital (MWRH) in Nepal.
METHODS: A descriptive cross-sectional study was carried out by analyzing trends using secondary data for the fiscal years 2006-2009 in the inpatient department of the MWRH.

RESULTS: The majority of patients admitted for treatment of COPD were women (60%) and from higher ethnic groups (having a comparative advantage in terms of social and economic status), with a greater prevalence among those aged 60-69 years (37% of overall cases). The incidence of COPD increased in consecutive years, with the highest load during the winter months. The cases were most concentrated in places with easiest access to the hospital.

CONCLUSION: COPD was found in higher proportions among women, those aged 60-69 years, and upper caste groups, during the cold months, and among residents of areas near the hospital in the mid-western region of Nepal. It is recommended that further detailed research and health education regarding COPD be carried out to reduce its burden and associated losses.

PMID:22563245[PubMed - indexed for MEDLINE] PMCID: PMC3340115


Abstract

Fiber-optic bronchoscopy is a safe and useful diagnostic and therapeutic tool for the management of the pulmonary diseases. The purpose of this study was to find out the demographic profiles, indications, bronchoscopic findings, and diagnoses of the patients who underwent bronchoscopic examination. Retrospective analysis of 231 consecutive bronchoscopies done in Nepal Medical College Teaching Hospital over the period of seven years (January 2003 to January 2010) was done. The commonest indication was radiological opacity (90.2%), followed by diffuse pulmonary infiltrates (4.3%). Cough was the commonest presenting symptom seen in 89.8% of the patients. 79.7% of the patients were smokers and the history of smoking among the patients diagnosed to have lung cancer was 94%. The commonest bronchoscopic finding was endobronchial growth (47.8%). Histopathological examination revealed malignancy in 53.8% of the patients, of which small cell lung cancer was 22.8% and non small cell lung cancer 77.2%. Even when growth was not visualized on bronchoscopy, biopsies attempted from the segments with radiological abnormality established the diagnosis of malignancy in 10.16%; pulmonary tuberculosis in 5.1% and Sarcoidosis in 2.2% of the cases.

PMID:21744771[PubMed - indexed for MEDLINE]


Abstract

AIMS AND OBJECTIVES: The aim of the study was to describe the clinical spectrum of the patients presenting with bronchiectasis at the referral clinic for the respiratory diseases in eastern Nepal. An attempt would also be made to provide an overview of factors responsible for poor lung health in the community.

MATERIALS AND METHODS: This is a retrospective observational study conducted at the Adult chest clinic of the department of internal medicine at the B.P Koirala Institute of Health Sciences (BPKIHS), Dharan Nepal. The medical records of all the consecutive patients presenting with the diagnosis of bronchiectasis in the adult chest clinic of department of medicine from January 2003 to December 2004 (two years) were reviewed for patient characteristics (age, gender, place of residence, occupation, smoking history, exposure to indoor air pollution due to use of biomass smoke, past and family history related to tuberculosis, and clinical characteristics such as clinical features and duration of symptoms).

RESULTS: During the study period of two years, 100 patients presented with the diagnosis of bronchiectasis, 80 (80%) patients were smokers and 50 (50%) patients had history of significant exposure to indoor air pollution. Abnormal Chest X-ray was seen in 85(85%) patients. Post tubercular bronchiectasis was the most common etiological diagnosis Smoking status and exposure to indoor air pollution were important determinant for hospitalisation in patients with post tubercular bronchiectasis.
CONCLUSIONS: In Nepal bronchiectasis remains one of the important chronic respiratory diseases, post tubercular variety being the commonest type. Tuberculosis, tobacco smoking and exposure to indoor air pollution contributes towards higher morbidity of this diseases.

PMID:18769086[PubMed - indexed for MEDLINE]


Abstract

BACKGROUND: Cigarette smoking is one of the cardinal causes for the development of bronchial hyperresponsiveness among the smokers.

OBJECTIVES: This study was perspectively designed to determine the peripheral bronchial responsiveness to sub-maximal exercise challenge in the asymptomatic smokers.

METHODS: The subjects were between age of 18-25 years without any findings of cardiorespiratory diseases. We performed the 5 min step test exercise at intensity of 80 to 90% of maximum predicted heart rate in 42 young adult male asymptomatic smokers to examine the effect of cigarette smoking on airway responsiveness. Forced expiratory spirogram was recorded before and at 0, 5, 10, 15 min after the completion of exercise. Pre- to post exercise drop in Forced Expiratory Volume in first second ≥ 15% was considered hyperresponsive to the challenge.

RESULT: The analysis of data (mean ± SE) indicated the bronchial hyper-responsiveness in 22 (52%) smokers. The post exercise recovery time pattern showed drop in forced expiratory spirogram from the resting baseline in the responsive smokers and the maximum percentage fall in the parameters or increase in airway resistance which reflect the peripheral airway integrity such as Forced Expiratory Flow 25% (20.30 ± 2.18 Vs 7.88 ± 3.23, p < 0.01), Forced Expiratory Flow 50% (18.46 ± 4.40 Vs 1.93 ± 2.78, p < 0.01), Forced Expiratory Flow 75% (23.94 ± 3.68 Vs 0.80 ± 4.72, p < 0.001) and Forced Expiratory Flow 25-75% (32.50 ± 4.79 Vs 3.64 ± 3.32, p < 0.001) was significantly higher in the responsive than non-responsive subgroup of the smokers.

CONCLUSION: The occurrence of peripheral airway resistance is more in the responsive than nonresponsive subset of smokers to the exercise challenge and hence more prone to develop obstructive airway disease in the long run.

PMID: 22609499[PubMed - indexed for MEDLINE]


Abstract

OBJECTIVES: COPD is increasingly recognized as a leading cause of global morbidity and mortality. Prevalence estimates for COPD are generally unavailable or unreliable. Thus, a simple and valid model for estimating COPD prevalence would provide essential information for policymakers in addressing a major burden of worldwide illness.

METHODOLOGY: We modelled the relationships among readily available demographic data (e.g. age, gender), smoking prevalence, and COPD prevalence based on a literature review. We also included risks of COPD from environmental pollution and associations with socioeconomic status.

RESULTS: The model specifies a minimum of eight input variables to predict COPD prevalence in a given population: population by age, gender, smoking prevalence, prevalence of COPD among smokers, proportion living in rural areas, country by level of development, and exposures to environmental pollution. Actual COPD prevalence data from large population-based studies in Spain, Norway, Poland and Nepal compared favourably with the model projections (P > or = 0.10).

CONCLUSION: The model is a simple tool for estimating the prevalence of COPD populations in a given region or country. Further studies are needed to prospectively validate the model and test the assumptions upon which it is based.

PMID:16268912[PubMed - indexed for MEDLINE]

Abstract

Smoking amongst women has become significant as the number of smoking women is increasing gradually in this developing society. It affects the lungs to produce Chronic Obstructive Pulmonary Disease (COPD). Present study was conducted over 100 smoker's women and 100 non-smoker women in the age group of 30-40 years. Three Lung Function Tests--FEVI, FVC and PEFR were employed to all smoking and non-smoking women. It was observed that all the above mentioned three parameters of lung function tests were reduced significantly among smoker women as compared to non-smoker women. These reduced parameters of lung function test among heavy smokers are suggestive of chronic obstructive lung diseases.

PMID:15821382[PubMed - indexed for MEDLINE]

2.2.5. Other diseases


Abstract

BACKGROUND: Research indicates that oxidative stress induced by smoking plays a role in breast cancer. In view of these reports, we aimed to study the relationship between smoking and oxidative stress in breast cancer patients from the western region of Nepal.

MATERIALS AND METHODS: The study included a control group of 42 females (non-smoking healthy women) and a test group subdivided into Group I consisting of 46 female breast cancer patients who were smokers and Group II consisting of 42 non-smoking breast cancer patients. Detailed history of the patients was collected with the help of pre-test proforma. Plasma levels of malondialdehyde (MDA), total antioxidant activity (TAA) which represents total dietary antioxidants, vitamin C and α-tocopherol were estimated by standard methods. Statistical analysis was done using SPSS version 16.

RESULTS: The plasma MDA, TAA, vitamin C and α-tocopherol were 1±1.4nmol/ml, 918±207μmol/L, 1±0.24mg/dL and 0.94±0.31mg/dL in controls, 5±1.2nmol/ml, 458±166 μmol/L, 0.64±0.32mg/dL and 0.5±0.3mg/dL in Group-I and 2.56±1.2nmol/ml, 663±178 μmol/L, 0.78±0.2mg/dL and 0.77±0.2mg/dL in Group-II, respectively. Vitamin C, α-tocopherol and TAA (p=0.001) were significantly reduced whereas MDA (p=0.001) was significantly raised in Group-I when compared to controls and Group-II.

CONCLUSIONS: We observed a significant rise in oxidative stress and low levels of antioxidants in breast cancer patients with smoking habit. It is well known that free radicals facilitate the progression of breast cancer, possibly increasing the risk of progression to the next stage.

PMID:25422256[PubMed - in process]


Abstract

Tobacco consumption is high amongst the people of Nepal. This study was carried out in 2011 in a rural community of Nepal, to compare pathological parameters associated with tobacco use in relation to nicotine metabolism between smokers, chewers, and a control group. A total of 216 volunteers provided blood and urine samples for testing nicotine metabolites, C-reactive protein, and cell counts. Data were analyzed using ANOVA, correlation, and t-tests using STATA. Differences in blood pressure amongst the groups indicate a role of smoking in preventing a rise in BP with age, likely attributable to a different mechanism of metabolism of tobacco constituents.

PMID:24491150[PubMed - indexed for MEDLINE]

Abstract

BACKGROUND: The prevalence of hypertension is increasing in much of the South Asian region, including Nepal. This paper reports the prevalence and risk factors of hypertension and pre-hypertension among adult women in a rural community of Nepal.

METHODS: Cross-sectional data on socioeconomic status (SES), lifestyle factors and blood pressure (BP) were collected from a cohort of 15,934 women in rural Nepal in 2006-08. Among a subsample (n=1679), anthropometry and biomarkers of cardiovascular risk were measured.

RESULTS: The mean age of women was 34.2 years (range 16.4-71.2 years). More than three percent (3.3%) had hypertension and 14.4% had pre-hypertension. In an adjusted analysis, lower SES, especially lower household farm assets and storage of food for long term consumption, was associated with increased odds of hypertension (OR = 1.14 for mid-level SES and OR = 1.40 for low SES; p for trend < 0.01). Smoking, alcohol use and not working outside the home were also associated with higher risk. In a subsample, both systolic BP (SBP) and diastolic BP (DBP) were positively associated with high triglycerides (SBP β = 4.1 mm Hg; DBP β =3.6 mm Hg), high HbA1c (SBP β = 14.0; DBP β = 9.2), raised fasting glucose (SBP β = 10.0; DBP β = 6.9), high BMI (SBP β = 6.7; DBP β = 5.1) and high waist circumference (SBP β = 6.2; DBP β = 5.3) after adjusting for potential confounders (p for all <0.01).

CONCLUSIONS: Although the prevalence of hypertension was low in this cohort, it was more prevalent among the poorer women and was strongly associated with other cardiovascular risks. These associations at a relatively young age may confer greater risk for cardiovascular disease among women in later life, indicating the need for interventions to reduce the progression from pre-hypertension to hypertension.

PMID:23336578[PubMed - indexed for MEDLINE] PMCID:PMC3566953


Abstract

AIM: The present study assess the effect of consumption of alcohol on oxidative stress and antioxidant status in patients suffering from different types of cancer.

METHODS: This hospital based case control study conducted in the Western part of Nepal covered a total of 93 cancer patients with or without alcohol intake and smoking habits, along with 94 age, sex and habit-matched individuals serving as controls. Plasma thiobarbituric acid reacting substances (TBARS), total antioxidant activity (TAA), vitamin C, α-tocopherol and erythrocyte reduced glutathione (GSH) were estimated and compared.

RESULTS: The TBARS level was found to be significantly higher (p≤0.001) in all types of cancer patients when compared to controls, being aggravated in alcoholics with a smoking habit. No statistical significance (p≥0.05) was observed in the level of vitamin C and α-tocopherol. GSH and TAA level were significantly decreased (ps0.001) in all the groups except those who consumed both branded as well as homemade alcohol and non-alcoholics without smoking habit.

CONCLUSION: Alcohol, irrespective of its commercial brand, increases oxidative stress in all types of cancer patients. This is even higher when alcohol intake is combined with a smoking habit. Decreased TAA and GSH are major risk factors for cancer development.

PMID:22994787[PubMed - indexed for MEDLINE]

Abstract

Hypertension is an important public health challenge in the developing and the developed world alike. However, hospital-based studies on cardiovascular diseases including hypertension in a developing country like Nepal have been limited. Objective: The objective of the present study was to determine the life style of patients before and after diagnosis of hypertension. Methods: A total of 100 adult hypertensive patients over 30 years of age who were attending in medical out patients department within 6 month to 2 years after first diagnosis of hypertension in Shahid Gangalal National Heart Centre and Tribhuvan University Teaching Hospital, in Kathmandu, Nepal, in April 2009, using a descriptive research design. The data was collected by interview using a questionnaire consisting of a combination of structured and semi structured questions. The data was analyzed by using SPSS 11.5 version. Results: This study found the respondents’ knowledge regarding hypertension was poor. Regarding life style of hypertensive patients, majorities (90%) of them were non-vegetarian before diagnosis but after diagnosis of hypertension the percentage of non-vegetarian was reduced by 10%. Similarly, the reduction in consumption of meat, eggs, ghee and oil (mustard, sunflower) by hypertensive patients was statistically significant difference (p = 0.000) after the diagnosis of hypertension. Regarding soyabean oil consumption, additional salty food and amount of salt intake there was no statistical significant difference before and after the diagnosis of hypertension. Likewise, physical exercise and stress reduction activities performed by hypertensive patients and change in drinking alcohol and smoking was found to be statistically significant difference (p = 0.000) after the diagnosis of hypertension. Conclusion: The adverse consequences of hypertension can be reduced by modifying the life style. Therefore more focus should be given in increasing the awareness about hypertension by developing information, education and communication materials on hypertension and setting up hypertensive counseling clinic in each hospitals.


Abstract

OBJECTIVES: There is growing evidence that oxidative stress (OS) has a causal relationship with cancer and a weak antioxidant defense can aggravate it further. We therefore, undertook this study to examine lipid peroxidation (TBARS), total antioxidant activity (TAA), ascorbic acid (vitamin C) and α- tocopherol levels in cancer patients, with special attention to the influence of smoking.

METHODS: The study subjects were 42 patients (61.19 ± 10.1 yrs) suffering from cancer and 43 normal subjects (NS) (56.69 ± 19.1 yrs). Plasma levels of TBARS, TAA, vitamin C and α- tocopherol were estimated.

RESULTS: TAA and α-tocopherol levels were significantly lower and TBARS levels significantly higher in cancer patients when compared to NS. In smoking cancer patient's α-tocopherol levels were significantly low and TBARS significantly raised.

CONCLUSION: Our observations indicate that increased lipid peroxidation, reduced total antioxidant activity and α-tocopherol levels are associated with cancer development, with and without smoking. However, a greater reduction of TAA in smokers may be due to increased oxidants introduced by smoking.

PMID:21517278[PubMed - indexed for MEDLINE]


Abstract

PURPOSE: There exists meagre information on the prevalence of periodontal conditions among adults in Nepal. Therefore, appropriate data on periodontal conditions are needed to facilitate planning, monitoring and evaluation of oral health programmes. The objective of the present study was to determine the prevalence of periodontal conditions among adults aged between 35 and 97 years in Nepal and also to elucidate any possible risk predictors of periodontal problems.
MATERIALS AND METHODS: The total subjects included in the present study were 1210 (33 to 49 years [n = 596] and 50 to 97 years [n = 614]). Community Periodontal Index scores were used to assess the periodontal status of the selected subjects. Self-reported data were used to ascertain oral health behaviour.

RESULTS: Logistic regression analyses showed the following observations for the age group 33 to 49 years: (1) bleeding was more likely found among those subjects who resided in rural areas and upper hill terrain, and among those who used non-fluoridated dentifrice; (2) bleeding was, however, less likely to be observed among those with primary or unfinished secondary school education (PSE); (3) calculus deposits were accentuated in illiterates, whereas less calculus formation was experienced by alcohol users; (4) periodontal pocket 4 to 5 mm was predominantly seen among illiterates and those with PSE, smokers and those who used non-fluoridated dentifrice; (5) periodontal pocket v 6 mm was observed among illiterates and those with PSE and those who used non-fluoridated dentifrice. With regard to 50 years old and above, the following observations were noticed: (1) bleeding was associated with the use of non-fluoridated dentifrice; (2) chewing betel nut showed a protective effect with regard to calculus formation; (3) being illiterate increased the likelihood of having periodontal pockets 6 mm or more in depth.

CONCLUSIONS: Several findings of the present study are in concordance with empirical evidence. However, the protective effect of alcohol and betel nut against calculus formation needs to be investigated further.

PMID:21594209[PubMed - indexed for MEDLINE]


Abstract

BACKGROUND: Children are at high risk of exposure to environmental tobacco smoke and biofuel smoke at home in developing countries. This study examines whether exposure to cigarette and biofuel smoke is associated with height-for-age of children (0-59 months) in seven developing countries.

METHODS: The data are from Demographic and Health Surveys conducted in Cambodia, Dominican Republic, Haiti, Jordan, Moldova, Namibia and Nepal between 2005 and 2007. The respondents were women (15-49 years) and their children in seven countries (n = 28 439), and men (15-59 years) from four countries. The outcome is a physical measurement of child height-for-age in standard deviation units.

RESULTS: Multilevel regression analysis showed that the country of residence modified the association between maternal smoking and child height-for-age. Exposure to maternal smoking was associated negatively with child height-for-age in Cambodia, Namibia and Nepal, whereas it was not in other countries. Multilevel regression analysis revealed that biofuel smoke exposure was associated with a decrease in child height-for-age [b = -0.13, 95% confidence interval (CI) = -0.19 to -0.07, P < 0.001]. No interaction was found between country of residence and biofuel smoke exposure. Multinomial logistic regression results showed that biofuel smoke exposure was associated with both stunting [odds ratio (OR) = 1.25, 95% CI = 1.08-1.44, P = 0.002] and severe stunting (OR = 1.27, 95% CI = 1.02-1.59, P = 0.04), after controlling for covariates.

CONCLUSION: The findings suggest that exposure to maternal smoking and biofuel smoke may contribute to growth deficiencies in young children. Programmes are needed to ensure smoke-free home environments for children.

PMID:19622677[PubMed - indexed for MEDLINE]


Abstract

OBJECTIVES: To assess the effect of cigarette smoking on lipid peroxidation induced oxidative stress, antioxidants, uric acid and blood sugar in normal subjects.
METHODS: The study included 61 normal subjects with regular smoking habit and 57 never-smokers normal subjects matched in respect to socio-economic status, age and BMI. Information regarding smoking habit and other personal details were collected by oral questionnaire. Total antioxidant activity (TAA), reduced glutathione (GSH), alpha-tocopherol (alpha-T), ascorbic acid (AA), uric acid (UA), plasma and urinary thiobarbituric acid reactive substances (TBARS), fasting blood sugar (FBS) and urinary creatinine (Cr) were estimated by standard procedures in both the groups. Ferric Reducing Antioxidant Power (FRAP) procedure is used to estimate TAA which measures total dietary antioxidants. Statistical analysis was done with SPSS version 10.

RESULTS: The mean pack years smoked by smokers was 14.4 +/− 15.8. The plasma TBARS level in smokers and never-smokers was 2.6 +/− 0.8 and 2.5 +/− 0.6 micromol/L respectively. The respective figure for urinary TBARS level was 4.6 +/− 2.7 and 3.7 +/− 1.4 micromol/gmCr. Smokers did not show any significant difference from never-smokers with respect to GSH, alpha-T, AA, plasma TBARS and FBS. However, the smokers had significantly lower levels of TAA (p<0.05) and raised level of urinary TBARS (p<0.05) and uric acid (p<0.01) as compared to never-smokers.

CONCLUSION: Our study suggests that smoking induces mild lipid peroxidation but the body is able to compensate for it by removing its adducts. Importantly it also indicates enhanced oxidation of purines which are essential components of both DNA and RNA. Dietary antioxidants are consumed to scavenge free radicals (FR) and other reactive species (RS) in smoke. Female smokers are more prone to oxidative insult than male smokers. In summary RS present in smoke induce mild lipid peroxidation but are not the major contributors of redox imbalance in smoke induced toxicity in the selected subjects.

PMID: 18604085 [PubMed - indexed for MEDLINE]


PMID: 16082402 [PubMed - indexed for MEDLINE]

3. Tobacco control interventions (including policies, legislations and taxation)


Abstract

INTRODUCTION: Almost a fifth of the world’s tobacco is consumed in smokeless form. Its consumption is particularly common in South Asia, where an increasing array of smokeless tobacco (SLT) products is widely available. Mindful of the growing public health threat from SLT, a group of international academics and policy makers recently gathered to identify policy and knowledge gaps and proposed strategies to address these.

METHODS: We reviewed key policy documents and interviewed policy makers and representatives of civil society organizations in 4 South Asian countries: Bangladesh, India, Nepal, and Pakistan. We explored if SLT features in existing tobacco control policies and, if so, the extent to which these are implemented and enforced. We also investigated barriers to effective policy formulation and implementation. The findings were presented at an international meeting of experts and were refined in the light of the ensuing discussion in order to inform policy and research recommendations.

RESULTS: We found that the existing SLT control policies in these 4 South Asian countries were either inadequate or poorly implemented. Taxes were low and easily evaded; regulatory mechanisms, such as licensing and trading standards, either did not exist or were inadequately enforced to regulate the composition and sales of such products; and there was little or no cessation support for those who wanted to quit.

CONCLUSIONS: Limited progress has been made so far to address the emerging public health threat posed by SLT consumption in South Asia. International and regional cooperation is required to advocate for effective policy and to address knowledge gaps.

PMID: 24616238 [PubMed - in process]

Executive summary

The National Health Policy 1991 of the Ministry of Health and Population of the Government of Nepal aims to extend the primary health care system to the rural population so that they benefit from modern medical facilities and trained health care providers in the areas of promotive, preventive and curative services.

Following this policy, the National Health Education, Information and Communication Centre (NHEICC) was established under the Department of Health Services in 1993, with a mandate to give high priority to information, education and communication in the health sector but since 2002 following organization reforms NHEICC comes directly under the Ministry of Health and Population. The goal of this Centre is to contribute to the attainment of the highest level of health status of the people. The objective of this analysis is to understand the extent of tobacco use among women and men and its impact on the health of women and children. Attempts have been made to analyse the data available in the Nepal Demographic and health surveys of 2001, 2006 and 2011. The data are limited to women and men of 15-49 ages and the findings are for these women and men.

As the data were not particularly focused on tobacco and its impact on health several aspects of health impacts of tobacco use are not available. However, impact of tobacco on reproductive health have to a certain extent been analysed. Tobacco use prevalence is higher among men compared to women and higher in rural areas than in urban areas. Women and men with no education, use tobacco more than their educated counterparts. Impact of tobacco use on the health of infants are clearly seen as infants born to mothers who smoke or use tobacco are, on average, of smaller size than their counterparts whose mothers did not use tobacco.

Similarly, infants born to mothers who use tobacco are of low weight. Using data from NDHS 2001, 2006 and 2011, it was possible to compare tobacco use prevalence. It was found that tobacco use prevalence has declined among men in 2006 compared to 2001 and further declined in 2011 but at very slow pace. Average number of cigarettes consumed has declined among men but increased among women in recent years. Impact of tobacco use are also seen on women's health such as women who smoke have experienced earlier menopause, have lower fecundity and more miscarriages.


Abstract

The tobacco epidemic is an increasing threat to public health with the tobacco burden particularly high in WHO's South-East Asia Region (SEAR). The Region has many obstacles to tobacco control, but despite these challenges, significant progress has been made in many countries. Although much work still needs to be done, SEAR countries have nevertheless implemented strong and often innovative tobacco control measures that can be classified as "best practices," with some setting global precedents. The best practice measures implemented in SEAR include bans on gutka, reducing tobacco imagery in movies, and warning about the dangers of tobacco. In a time of scarce resources, countries in SEAR and elsewhere must ensure that the most effective and cost-efficient measures are implemented. It is hoped that countries can learn from these examples and as appropriate, adapt these measures to their own specific cultural, social and political realities.

PMID: 23442393 [PubMed - indexed for MEDLINE]


No abstract available

Summary

This Regional Strategy for Tobacco Control primarily provides a longer-term strategic guidance to Member States of the South-East Asia Region to support them in formulating evidence-based policies and designing a sustained and cost-effective programme on tobacco control to counter successfully the rising public health concerns of tobacco use in the Region. The Region is home to around 250 million smokers and nearly the same number of smokeless tobacco users. About 1.3 million deaths occur every year, including around 160,000 deaths due to exposure to second-hand smoke. The increasing trend of tobacco use and its devastating effects pose a grave threat to the health and well-being of the people of the Region. Thus, the implementation of the Regional Strategy is expected to eventually protect the people of the Region from the enormous negative health, social, economic and environmental consequences of tobacco consumption and exposure to tobacco smoke.


Abstract

BACKGROUND: HIV care providers may be optimally positioned to promote smoking behaviour change in their patients, among whom smoking is both highly prevalent and uniquely harmful. Yet research on this front is scant, particularly in the developing country context. Hence, this study describes smoking behaviour among people living with HIV/AIDS (PLWHA) in the Kathmandu Valley of Nepal, and assesses the association between experience of physician-delivered smoking status assessment and readiness to quit among HIV-positive smokers.

METHODS: We conducted a cross-sectional survey of PLWHA residing in the Kathmandu Valley, Nepal. Data from 321 adult PLWHA were analyzed using multiple logistic regression for correlates of current smoking and, among current smokers, of motivational readiness to quit based on the transtheoretical model (TTM) of behaviour change.

RESULTS: Overall, 47% of participants were current smokers, with significantly higher rates among men (72%), ever-injecting drug users (IDUs), recent (30-day) alcohol consumers, those without any formal education, and those with higher HIV symptom burdens. Of 151 current smokers, 34% were thinking seriously of quitting within the next 6 months (contemplation or preparation stage of behaviour change). Adjusting for potential confounders, experience of physician-delivered smoking status assessment during any visit to a hospital or clinic in the past 12 months was associated with greater readiness to quit smoking (AOR = 3.34; 95% CI = 1.05, 10.61).

CONCLUSIONS: Roughly one-third of HIV-positive smokers residing in the Kathmandu Valley, Nepal, are at the contemplation or preparation stage of smoking behaviour change, with rates significantly higher among those whose physicians have asked about their smoking status during any clinical interaction over the past year. Systematic screening for smoking by physicians during routine HIV care may help to reduce the heavy burden of smoking and smoking-related morbidity and mortality within HIV-positive populations in Nepal and similar settings.

PMID: 21878132 [PubMed - indexed for MEDLINE] PMCID: PMC3175193


States of the SEA Region. It highlights some major milestones achieved as well as the challenges faced while implementing tobacco control measures in Member countries.


Summary

Smokeless tobacco consumption in the South-East Asia Region is a growing threat to health. The region is a hub for smokeless tobacco production and use. This category of tobacco product is manufactured in various forms. The diversity of these tobacco products, their availability and affordability make them obvious alternatives to the relatively more expensive cigarettes. However, the dangers and risks associated with smokeless tobacco are not well understood by the population. Smokeless tobacco is not perceived as an urgent threat in many of the Member countries and consequently, tobacco control efforts for this type of tobacco use are not intense. The tobacco control agenda needs to keep up the pressure and apply a wider approach and holistic strategies to address this issue. To this end, the “Expert Group Meeting on Smokeless Tobacco Control and Cessation” was convened in New Delhi, India, on 16-17 August 2011. The meeting allowed experts to share information, identify the next steps on smokeless tobacco control and cessation, and provide inputs to a policy paper to be published later. This report compiles the issues faced by Member States concerning smokeless tobacco and provides recommendations to policy-makers and stakeholders.


Summary

Tobacco Cessation: A Manual for Nurses, Health Workers and other Health Professionals is a comprehensive manual on tobacco cessation. It provides a detailed overview of the extent and patterns of use of tobacco products in the South-East Asia (SEA) Region and the related health burden. Among the top 10 countries globally with the highest levels of tobacco use among males, as many as three are from the SEA Region. The Manual highlights the need to provide tobacco cessation interventions by nurses, health workers and other health professionals, and graphically depicts the adverse health effects of tobacco on almost all organs of the human body. In the section on interventions, the Manual reiterates that tobacco cessation efforts start with the successful identification of tobacco use. It provides effective tools and techniques for tobacco cessation interventions, including visits and follow-up of patients, listing of pros and cons, worksheets, group-based interventions and pharmacotherapy. Apart from the usual methods of cessation such as tapering off and abrupt cessation (‘cold turkey’), the Manual also lists new and innovative interventions such as the ‘Recovery Calendar’. Above all, the Manual highlights the importance of recognizing the dangerous effects of tobacco use, the benefits of quitting and the need to provide effective follow-up to prevent ‘lapse’ and ‘relapse’. It includes a series of succinct, ready-to-use methods, counselling techniques and model motivational tools that can be practiced by the health professional to promote tobacco cessation.


Summary

Helping People Quit Tobacco: A Manual for Doctors and Dentists is a comprehensive dossier on tobacco cessation with the help of intervention from doctors and dentists. The document begins with the premise that the core responsibility of any doctor or dentist includes reducing the use of tobacco among his patients and in the community, and encouraging tobacco cessation. The importance of the TEACH tool to meet the MPOWER goals of the World Health Organization are also enunciated. The Manual cites relevant statistics from the apex global tobacco surveys to highlight the extent and enormity of the tobacco epidemic in the South-East Asia Region, and also outlines the nature of harm caused by tobacco use, its inherent links with several debilitating diseases and the manifold risks of using smoking and smokeless tobacco products. The Manual encourages doctors and
dentists to identify at the earliest possible stage tobacco use in a patient, and provides step-by-step guidelines on intervention and assisted cessation through counselling, motivational tools and medication or pharmacotherapy. A concluding section provides details on ‘lapse’ and ‘relapse’ and how to overcome the same.


**Summary**

This brief profile on tobacco health warnings in the South-East Asia Region emphasizes the need for health warnings to ensure tobacco control. It also depicts the situation with respect to tobacco health warnings in the Region. It gives an overview of the status of implementation of Article 11 of the WHO framework convention on tobacco control on packaging and labelling of tobacco products and highlights the main hurdles encountered by Member States in this area.


**Summary**

Reducing the use of tobacco is a complex task as it involves enormous socio-cultural and health dimensions. It requires a multi-sectoral and integrated approach that includes consistent and continuous communication for behavioural and social change. Communication as such, is a strategic process to influence individual and group behaviour that needs systematic planning and implementation. This document tends to define the framework and the key elements of communication for tobacco control to be used in the Member States of the South-East Asia Region. It focuses on the major approaches of communication and guiding principles for planning and using the communication components for designing the effective communication for tobacco control programme. It suggests a model for communication planning based on communication objectives, target groups and potential barriers which determines the communication approach, message development and selection of media. It emphasizes on the importance of using media mix, partnership, capacity building and regular evaluation of communication activities.


**Summary**

Since 2007 the Bloomberg Global Initiative to Reduce Tobacco Use (BGI) is being implemented in the South-East Asia Region. Four countries from the Region - Bangladesh, India, Indonesia and Thailand - were selected as priority countries under the Initiative. In 2007 both human and financial support was provided to these countries to strengthen their capacity for tobacco control. The WHO South-East Asia Region was the first and only Region to have organized an orientation workshop for all BGI staff. The workshop was found to be useful for the implementation of the Initiative in the Region. It has also enhanced the knowledge and team spirit of the whole BGI team and provided a unique opportunity to discuss and share the challenges that the Initiative is facing in terms of coordination for effective implementation. The workshop provided the platform to discuss and decide on a common approach to take the Initiative to its logical fruition.

Summary

Smoking and exposure to second-hand smoke (SHS) are major contributors to the chronic disease burden in the South-East Asia Region. Due to weak tobacco control measures, especially inadequate measures in the area of SHS, a very large population in the Region is exposed to SHS. The regional profile on Smoke-free Environments depicts the situation with respect to exposure to SHS in the Region. It also describes briefly the existing measures in the Region for protecting people from SHS exposure. Making environments completely smoke-free is the most effective way to protect the population from exposure to SHS everywhere, including public places and workplaces. This can only be done by developing and strengthening smoke-free policies and legislation, and enforcing the same.

_________________________


Abstract

This paper illustrates case studies of four developing countries and compares them as to relative advancement in tobacco control as prescribed by the Framework Convention on Tobacco Control. Tobacco-control efforts first seem to involve assessment of tobacco use prevalence and passage of tobacco-control legislation (e.g., warning labels). Tanzania, Nepal, and China serve as examples. Eventually, an integrated tobacco-control stance that demonstrates several cycles of tobacco-control activities occurs, as is shown in Thailand. Through these case studies, one can achieve a sense of the direction of progress in tobacco control in developing countries.

PMID: 17978974 [PubMed - indexed for MEDLINE]

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Summary

This Manual is designed for teachers who work with 13-15-year-old students in Member countries of the World Health Organization (WHO)'s South-East Asia (SEA) Region. The Manual uses skill-based health education through curricular and co-curricular activities. Skill-based health education is designed to help students acquire the knowledge, attitude and skills that are needed to make informed choices and decisions, understand the consequences of tobacco use and tobacco advertising, adopt and practice healthy behaviours to avoid risks and create conditions that are conducive to health. This approach also empowers students to contribute to the creation of tobacco-free environment in which they learn and live. The Manual provides young people with an opportunity to participate in an environmental approach to tobacco control. The decision that young people make about tobacco use are heavily influenced by the physical, social, economic and legal environments in which they live. The activities in the Manual represent a departure from the traditional approach of simply educating students not to use tobacco, which is often considered an ineffective strategy. The progressive vision helps young people move beyond a reliance on awareness education to embrace a comprehensive and science-based approach. The focus in the Manual is on what young people can do to create tobacco-free norms and environments and to thwart manipulative efforts of the tobacco industry to create tobacco addictions. The Manual includes classroom activities which a school can adopt either in the form of a regular or optional curriculum. It uses a series of activities which can be carried out as interactive/participatory activities in classrooms (curricular), or as field activities in the community (co-curricular activities). A participatory approach gives students the opportunity to observe and actively practice skills, thus being engaged in "learning by doing." In order to make these activities interactive, the class is split into small working groups and discussions are held in bigger groups based on inputs from the smaller groups. Schools that would use this Manual may adopt a similar pattern or can modify it according to their situations and needs. Teaching posters, handouts, worksheets, and answer sheets, are provided in this Manual to be used in any combination by the teacher or simply as a guide for teaching. Additionally, clippings from newspapers, a few sets of graph paper, pencils, a black board, and chalk may be used as supplementary materials by the teacher.

**Summary**

As part of the General Obligations under Article 5 of the WHO Framework Convention on Tobacco Control (FCTC), each Party shall develop, implement and periodically update and review multisectoral national tobacco control strategies, plans of action and programmes in order to fully comply with the provisions of the Convention. In order to provide some general guidelines on how to develop these strategies and plans of action, the Regional Strategy for Tobacco Control and Regional Plan of Action for Tobacco Control were developed by the Regional Office. The Regional Strategy contains the vision and strategic plan for tobacco control in the WHO South-East Asia Region for the next five years (2006-2010). The Plan of Action was based on the Regional Strategy for Tobacco Control (2006-2010). While the Convention provides guidelines to reduce the harm from tobacco, definitive actions to control tobacco have to take place at the country level. The successful implementation of the FCTC provisions depends almost entirely on the ability of the countries. Some countries in the Region have already developed their national strategies and plans of action and others are in the process of doing so. These two documents would be helpful in revising the existing national strategies and plans of action in countries that have already developed the same to make them fully compatible with the WHO FCTC. The documents would also be helpful developing national strategies and plans of action by countries which have not yet done so.


**Summary**

As part of the General Obligations under Article 5 of the WHO Framework Convention on Tobacco Control (FCTC), each Party shall develop, implement and periodically update and review multisectoral national tobacco control strategies, plans of action and programmes in order to fully comply with the provisions of the Convention. In order to provide some general guidelines on how to develop these strategies and plans of action, the Regional Strategy for Tobacco Control and Regional Plan of Action for Tobacco Control were developed by the Regional Office. The Regional Strategy contains the vision and strategic plan for tobacco control in the WHO South-East Asia Region for the next five years (2006-2010). The Plan of Action was based on the Regional Strategy for Tobacco Control (2006-2010). While the Convention provides guidelines to reduce the harm from tobacco, definitive actions to control tobacco have to take place at the country level. The successful implementation of the FCTC provisions depends almost entirely on the ability of the countries. Some countries in the Region have already developed their national strategies and plans of action and others are in the process of doing so. These two documents would be helpful in revising the existing national strategies and plans of action in countries that have already developed the same to make them fully compatible with the WHO FCTC. The documents would also be helpful developing national strategies and plans of action by countries which have not yet done so.


No abstract available


Summary

The manual is intended primarily for people who work in a health facility serving a 'local' population. A doctor or nurse or someone else in the health facility can use the guidelines to create changes in the communities served by them. But people outside the medical or health professions too can use these guidelines effectively. The interventions (except sections in chapter 8 on 'cessation') can be implemented by any concerned individual, and do not require special medical expertise. The manual can be used for self-instruction or for training. The activities suggested are for implementation at the level of local communities, not at national level. So the emphasis is on action relevant to a community or a clinic.

4. Tobacco promotion: Advertising and sponsorship

Simpson D. Nepal: ad peak overshadows law drafters. Tob Control 2007;16(2):77-78

5. Tobacco economics including tobacco industry interference


Summary:

Over the past 20 years, with the liberalization of international trade, trade in tobacco and tobacco products has rapidly expanded. This has led to a corresponding rise in tobacco consumption across low- and middle-income countries since the 1980s, and poses a major threat to global public health. This phenomenon highlights the inevitable connection between international trade agreements and the tobacco control policies enshrined in the WHO Framework Convention on Tobacco Control (FCTC). An Expert Intercountry Consultation on Tobacco and Trade was held at the WHO Regional Office for South-East Asia, New Delhi on 3-4 October 2012. A total of 31 participants from the ministries of health, trade and, agriculture and legal offices from nine Member States as well as WHO staff from WHO country offices in Bangladesh, India, Indonesia, Myanmar and Nepal attended. Recommendations for the Member States were: (1) establishing and strengthening coordination between the ministries of health and trade on policies and regulations on trade and investment relating to tobacco and tobacco products; (2) promoting advocacy on health perspectives of international and investment agreements; (3) strengthening full implementation of the WHO FCTC; (4) mobilizing more funds for tobacco control in the Member States; (5) ensuring law enforcement and public compliance; and (6) conducting research on health cost studies and alternative livelihood for tobacco farmers. It was recommended that WHO should strengthen the capacities of Member States on health perspectives of international trade and investment agreements.


Summary:

There is a fundamental and irreconcilable conflict between the interests of the tobacco industry and public health policy. On the one hand, the tobacco industry produces and promotes a product that has been scientifically proven to be highly addictive and harmful, and which exacerbates social ills, including poverty. On the other hand, governments and the public health sector try to improve the health of the population by implementing measures to reduce tobacco use. As the countries work towards developing and enforcing tobacco control measures, interference by the tobacco industry to counter these measures increases. The growing, manufacturing, distribution and selling components of the tobacco industry get involved in such interference through different means. Article 5.3 of the WHO Framework Convention on Tobacco Control and its Guidelines recommend how such interference should be addressed. Nineteen delegates from different sectors of 10 countries of the WHO South-East Asia Region attended a regional meeting on countering tobacco industry interference, from 19-21 March 2013, at the WHO Regional Office for South-East Asia, New Delhi, to analyse this issue and formulate strategies to address it. The recommendations for the Member States were to: (1) review and revise as needed, the terms of reference of the national tobacco control focal points; (2) formulate and implement, within one year, a communication strategy to raise awareness among various government and nongovernment stakeholders about tobacco industry interference and measures to counter it; (3) develop and implement a sustainable and systematic national and regional monitoring mechanism to ensure that information related to the tobacco industry is current and accurate; (4) review, and where not available, formulate a code of conduct for national officials that provides guidance on how to prevent conflicts of interest, real or perceived,
between the civil service, elected officials and other national officials and the tobacco industry interests; and (5) review, and where not available, formulate rules for interaction between government and the tobacco industry, based on Guidelines for Article 5.3 of the WHO Framework Convention on Tobacco Control.


Summary

Health-care financing continues to be a contentious issue in most Member States of the WHO South-East Asia Region. While making an effort to address the concerns about health services delivery and accessibility, matters regarding mechanisms of financing and budgeting must also be taken into account. To this end, a collaborative and consultative Expert Group Meeting aiming at fostering ideas and exchanging thoughts was organized at WHO SEARO, New Delhi, India, on 13-14 June 2011. Following this meeting, the document titled Tobacco Taxation and Innovative Health-care Financing was developed. It highlights the empirical evidence and existing literature on tobacco taxation, the practices of earmarking taxes for specific projects or programmes in Member States, and innovative methods of financing health-care.


Abstract

This paper examines the social, cultural, economic and legal dimensions of tobacco control in the South-East Asia Region in a holistic view through the review of findings from various studies on prevalence, tobacco economics, poverty alleviation, women and tobacco and tobacco control laws and regulations. Methods were Literature review of peer reviewed publications, country reports, WHO publications, and reports of national and international meetings on tobacco and findings from national level surveys and studies. Tobacco use has been a social and cultural part of the people of South-East Asia Region. Survey findings show that 30% to 60% of men and 1.8% to 15.6% of women in the Region use one or the other forms of tobacco products. The complex nature of tobacco use with both smoking and smokeless forms is a major challenge for implementing tobacco control measures. Prevalence of tobacco use is high among the poor and the illiterate. It is higher among males than females but studies show a rising trend among girls and women due to intensive marketing of tobacco products by the tobacco industry. Tobacco users spend a huge percent of their income on tobacco which deprives them and their families of proper nutrition, good education and health care. Some studies of the Region show that cost of treatment of diseases attributable to tobacco use was more than double the revenue that governments received from tobacco taxation. Another challenge the Region faces is the application of uniform tax to all forms of tobacco, which will reduce not only the availability of tobacco products in the market but also control people switching over to cheaper tobacco products. Ten out of eleven countries are Parties to the WHO Framework Convention on Tobacco Control and nine countries have tobacco control legislation. Enforcement of control measures is weak, particularly in areas such as smoke-free environments, advertisement at the point of sale and sale of tobacco to minors. Socio-cultural acceptance of tobacco use is still a major challenge in tobacco control efforts for the governments and stakeholders in the South-East Asia Region. The myth that chewing tobacco is less harmful than smoking tobacco needs to be addressed with public awareness campaigns. Advocacy on the integration of tobacco control with poverty alleviation campaigns and development programs is urgently required. Law enforcement is a critical area to be strengthened and supported by WHO and the civil society organizations working in the area of tobacco control.

PMID: 22089683 [PubMed - indexed for MEDLINE]


Summary

This strategy sets out the objectives and priority activities for resource mobilization for 2010-2011 to ensure effective implementation of the Strategic Action Plan for Tobacco Control in South-East Asia Region. It provides strategic approaches and guidance on the major steps for resource mobilization highlighting the process of assessment for resource requirement and the potential for raising it; analysis of donor intelligence, building alliance and carrying out advocacy. It emphasizes on the need to diversify funding sources for sustainable financing to the programme and also on the importance of realistic programme development and management of resources.

World Health Organization, Regional Office for South-East Asia. **Implications of the agreement on South Asia free trade area on tobacco trade and public health in the SAARC region.** New Delhi: WHO SEARO; 2008.

Summary

Trade liberalization programme has become operational through the introduction of the South Asian Free Trade Area (SAFTA) among South Asian nations. The agreement includes tobacco and tobacco products under the "Sensitive List". This document lists ways in which trade in tobacco products can be managed under SAFTA in the context of the WHO Framework Convention on Tobacco Control.


Abstract:

This study is based both on secondary and primary data. The primary data were collected using a smoking behaviour survey and a purposive sample survey among tobacco-cultivating farmers. The overall smoking prevalence in Nepal for the population aged 15 or more is estimated at 37.4%, and is higher (47.4%) among males than among females (27.6%). Poor people are more likely to consume tobacco than their better-off counterparts, resulting in increased health hazards and the diversion of scarce income. The tobacco industry is a lucrative business for the private sector and government; the private sector makes large profits, and the tax revenue is substantial. Economic analysis estimated the price elasticity of demand for cigarettes and *bidi* at \(-0.882\). It is found also that the poor and the young are the groups most sensitive to price changes. Therefore, considering health and economic benefits and poverty alleviation goals, a policy of real price increase through taxation of all types of tobacco product would be a desirable public policy for the government of Nepal to consider.

1. Tobacco use Surveillance (surveys and reports)

1.1. Youth in general


Abstract

OBJECTIVES: This study aimed to determine the prevalence and underlying sociodemographic correlates of smoking among Sri Lankans.

METHODS: A cross-sectional sample (N = 5000, age >18 years) was selected using a multistage random cluster sampling. Data were collected using an interviewer-administered questionnaire.

RESULTS: Response rate was 91% (n = 4532); males 40%; mean age 46.1 years (±15.1). Overall, urban and rural prevalence of current smoking (smoking) was 18.3%, 17.2%, and 18.5%, respectively (P = non significant, urban vs rural). Smoking was much higher in males than in females (38.0% vs 0.1%, P < .0001). Ex-smokers comprised 10.0% (males 20.7%, females 0.1%, P < .0001). Among the smokers 87.0% smoked <10 cigarettes per day. The male age groups < 20 and 20 to 29 years had the lowest (15.6%) and the highest (44.6%) prevalence of smoking, respectively. In males, smoking was highest in the least educated (odds ratio = 1.96, P = .001).

CONCLUSIONS: Smoking is common among Sri Lankan males and is associated with lower education, income, and middle age.

PMID: 20460291 [PubMed - indexed for MEDLINE]

1.1.1. Global Youth Tobacco Survey (GYTS)


Abstract

OBJECTIVES: This study aimed to investigate tobacco use behaviours and their correlates among secondary school students in Nepal and Sri Lanka together with cross-country comparisons.

DESIGN: Cross-sectional survey.

METHODS AND SETTINGS:

The data were obtained from the Global Youth Tobacco Survey (GYTS), 2007. Current tobacco use was considered as a response variable. Predictors were selected based on existing literature and theories on adolescent tobacco use. The data of 1,444 Nepalese and 1,377 Sri Lankan students aged 13–15 years was used for analysis.

RESULTS: Prevalence of tobacco use varies with 9.4% and 9.1% among Nepalese and Sri Lankan students respectively. Boys (13.2 vs. 5.3 for Nepal, 12.4 vs. 5.8 for Sri Lanka), older and senior students was more likely to be tobacco users in both countries. The average age of tobacco initiation was 10.2 years in Nepal and 8.6 years in Sri Lanka. Factors, namely, individual characteristics, tobacco use among friends, smoking at home and public places, free tobacco products, and lessons about negative effects of tobacco in class were significantly

An annotated bibliography of scientific studies done on tobacco topic in WHO South-East Asia Region countries 407
associated with tobacco use in Nepal and Sri Lanka. For instance, friends’ tobacco use was a good predictor for adolescents’ usage (odds ratio [OR] = 4.0, confidence interval [CI] = 2.61–6.23 in Nepal; OR = 2.5, CI = 1.50–4.23 in Sri Lanka). Similarly, course curriculum significantly reduced smoking among students.

**CONCLUSION:** Prevention of tobacco use among school students should be top priority of a country as they are long-term customers and replacement smokers who quit or die. Therefore, comprehensive strategies as we proposed along with existing prevention programmes should be tightened to stop them from hazardous behaviours.

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**Abstract**

**BACKGROUND:** At least two rounds of the Global Youth Tobacco Survey (GYTS) have been completed in most of the countries in the World Health Organization South-East Asia region. Comparing findings from these two rounds provides trend data on smokeless tobacco (SLT) use for the first time.

**METHODS:** This study uses GYTS data from Bangladesh, Bhutan, India, Indonesia, Maldives, Myanmar, Nepal, Sri Lanka, Thailand, and Timor-Leste during 2006-2013. GYTS is a nationally representative survey of 13-15-year-old students using a consistent and standard protocol. Current SLT use is defined as using any kind of SLT products, such as chewing betel quid or non-betel quid or snuffing any other products orally or through the nasal route, during the 30 days preceding the survey. Prevalence and 95% confidence intervals were computed using SAS/SUDAAN software.

**RESULTS:** According to most recent GYTS data available in each country, the prevalence of current use of SLT among youth varied from 5.7% in Thailand to 23.2% in Bhutan; among boys, from 7.1% in Bangladesh to 27.2% in Bhutan; and among girls, from 3.7% in Bangladesh to 19.8% in Bhutan. Prevalence of SLT was reported significantly higher among boys than girls in Bhutan (boys 27.2%; girls 19.8%), India (boys 11.1%; girls 6.0%), Maldives (boys 9.2%; girls 2.9%), Myanmar (boys 15.2%; girls 4.0%), and Sri Lanka (boys 13.0%; girls 4.1%). Prevalence of current SLT use increased in Bhutan from 9.4% in 2009 to 23.2% in 2013, and in Nepal from 6.1% in 2007 to 16.2% in 2011.

**CONCLUSION:** The findings call for countries to implement corrective measures through strengthened policy and enforcement.

PMID: 25526249 [PubMed - in process]

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**Abstract**

Tobacco use is one of the major preventable causes of premature death and disease in the world. The World Health Organization (WHO) attributes approximately 5 million deaths per year to tobacco use, a number expected to exceed 8 million per year by 2030. In 1999, the Global Youth Tobacco Survey (GYTS) was initiated by WHO, CDC, and the Canadian Public Health Association to monitor tobacco use, attitudes about tobacco use, and exposure to secondhand smoke (SHS) among students aged 13-15 years. Since 1999, the survey has been completed by approximately 2 million students in 151 countries. A key goal of GYTS is for countries to repeat the survey every 4 years. This report summarizes results from GYTS conducted in Sri Lanka in 1999, 2003, and 2007. The findings indicated that during 1999-2007, the percentage of students aged 13-15 years who reported current cigarette smoking decreased, from 4.0% in 1999 to 1.2% in 2007. During this period, the percentage of never smokers in this age group likely to initiate smoking also decreased, from 5.1% in 1999 to 3.7% in 2007. Future declines in tobacco use in Sri Lanka will be enhanced through development and implementation of new tobacco-control measures and strengthening of existing measures that encourage smokers to quit, eliminate exposure to SHS, and encourage persons not to initiate tobacco use.

PMID: 18496502 [PubMed - indexed for MEDLINE]
1.2. Children (including school going children)


**Abstract**

**OBJECTIVE:** This study aimed to understand the usage patterns and correlates of illicit drug use among school children in Colombo district, Sri Lanka.

**METHODS:** A cross-sectional study was carried out among grade 10 and 12 students using a self-administered questionnaire.

**RESULTS:** From the 6000 students selected, 5353(89.22%) responded. Betel chewing with tobacco was seen in 28.48% males and 10.44% females. Substances such as Barbul, Madana Modaka, and cough syrups that are not established as illicit drugs were used as psychoactive substances. Ingredients of some of these compounds are not fully understood or regulated. Prevalence of cannabis use was 3.85% in males and 0.24% in females. Studying non science subjects for Advanced Level, doing sports, low academic performance, and peer smoking significantly increased the odds of using one or more substances (P < .05).

**CONCLUSIONS:** Many types of illicit substances were used by schoolchildren. More strategies to prevent further aggravation of these behaviors are needed. Constituents of some compounds are not understood and need further evaluation. Recognized high-risk groups can be targets for preventive and cessation programs.

PMID: 23577907 [PubMed - indexed for MEDLINE]


**Abstract**

Tobacco smoking is an important problem among schoolchildren. The authors studied the patterns of tobacco smoking among schoolchildren in Colombo, Sri Lanka, using a self-administered questionnaire. Multistaged stratified random sampling was used to select 6000 students. Response rate was 90.7% (5446), out of which 53.4% were males. Prevalence rates for males and females, respectively, were as follows: having smoked at least 1 complete cigarette: 27.0% and 13.3%, smoked more than 100 cigarettes: 2.3% and 0.3%, daily smoking: 1.8% and 0.2%. Mean age of starting to smoke was 14.16 years. The tobacco products most used were cigarettes (91.5%) and bidis (3.8%). In univariate analysis, male gender, parental smoking, studying non-science subjects, peer smoking, and participating in sports were significantly associated with smoking of at least 1 complete cigarette (P < .05). In multivariate analysis, the most significant correlates were having close friends (odds ratio = 3.29, confidence interval = 2.47-4.37) or parents who smoked (odds ratio = 1.86, confidence interval = 1.28-2.71). Female smoking has increased from previously reported values. These high-risk groups can be targets for preventive programs.

PMID: 22426558 [PubMed - as supplied by publisher]


**Abstract**

455 students, ages 15-19 years and living in a southern district of Sri Lanka, were self-administered a questionnaire to identify the prevalence of tobacco and alcohol use and to assess student attitudes toward the alcohol and tobacco industries. The current prevalence of smoking was 10.6% among men and 0.0% among women. The current prevalence of alcohol use was 21.2% among men and 3.3% among women. A significantly higher proportion of men than women expressed favorable attitudes toward the alcohol industry (27% versus 7%) and the tobacco industry (13% versus 5%). Given that aggressive marketing strategies are used by these
industries to promote their products among young people, epidemiological studies of the substances using scientifically sound methods to formulate effective prevention strategies are essential.

PMID: 15217039 [PubMed - indexed for MEDLINE]

1.3. Health professionals (including medical and dental students)


Abstract

Tobacco use is widely entrenched in the South-East Asia (SEA) Region leading to high morbidity and mortality in this region. Several studies revealed that tobacco use is widespread among youth and school children. Exposure to second-hand smoke was reported as around 50% or more in three countries - Myanmar (59.5%), Bangladesh (51.3%), and Indonesia (49.6%). Health profession students encompassing medical, dental, nursing and pharmacy disciplines, and even qualified health professionals are no exception from tobacco use. While they are regarded as role models in tobacco cessation programs, their tobacco addiction will carry a negative impact in this endeavour. A mere inquiry about the smoking status of patients and a brief advice by doctors or dentists increases quit rates and prompts those who have not thought about quitting to consider doing so. Evidence from some randomized trials suggests that advice from motivated physicians to their smoking patients could be effective in facilitating cessation of smoking. However, the low detection rate of smokers by many physicians and the small proportion of smokers who routinely receive advice from their physicians to quit have been identified as a matter of concern. This paper describes the role and issues of involvement of health professionals in tobacco control. Data from a variety of sources is used to assess the status. Although there are some differences, tobacco use is widespread among the students and health professional students. Exposure to second hand smoke is also a matter of concern. Tobacco-related problems and tobacco control cut across a vast range of health disciplines. Building alliances among the health professional associations in a vertical way will help synergize efforts, and obtain better outcomes from use of existing resources. Health professional associations in some countries in the SEA region have already taken the initiative to form coalitions at the national level to advance the tobacco control agenda. In Thailand, a Thai Health Professional Alliance against Tobacco, with 17 allies from medical, nursing, traditional medicine, and other health professional organizations, is working in a concerted manner toward promoting tobacco control. Indian Dental Association intervention is another good example.

PMID: 23442394 [PubMed - indexed for MEDLINE]

1.3.1. Global Health Personnel Student Survey (GHPSS)


Abstract

BACKGROUND: The Medical and Dental Global Health Professions Student Surveys (GHPSS) are surveys based in schools that collect self-administered data from students on the prevalence of tobacco use, exposure to second hand smoke, and tobacco cessation training, among the third-year medical and dental students.

MATERIALS AND METHODS: Two rounds of medical and dental GHPSS have been conducted in Bangladesh, India, Myanmar, Nepal, Sri Lanka, and Thailand, among the third-year medical and dental students, between 2005 and 2006 and 2009 and 2011.

RESULTS: The prevalence of any tobacco use among third-year male and female medical students did not change in Bangladesh, India, and Nepal between 2005 and 2006 and 2009 and 2011; however, it reduced significantly among females in Myanmar (3.3% in 2006 to 1.8% in 2009) and in Sri Lanka (2.5% in 2006 to 0.6% in 2011). The prevalence of any tobacco use among third-year male dental students did not change in Bangladesh, India, Nepal, and Thailand between 2005 and 2006 and 2009 and 2011; however, in Myanmar, the prevalence increased significantly (35.6% in 2006 to 49.5% in 2009). Among the third-year female students, a significant increase in prevalence was noticed in Bangladesh (4.0% in 2005 to 22.2% in 2009) and Thailand (0.7% in 2006 to 2.1% in 2011). It remained unchanged in the other three countries. Prevalence of exposure to
second-hand smoke (SHS) both at home and in public places, among medical students, decreased significantly in Myanmar and Sri Lanka between 2006 and 2009 and in 2011. Among dental students, the prevalence of SHS exposure at home reduced significantly in Bangladesh, India, and Myanmar, and in public places in India. However, there was an increase of SHS exposure among dental students in Nepal, both at home and in public places, between 2005 and 2011. Medical students in Myanmar, Nepal, and Sri Lanka reported a declining trend in schools, with a smoking ban policy in place, between 2005 and 2006 and 2009 and 2011, while proportions of dental students reported that schools with a smoking ban policy have increased significantly in Bangladesh and Myanmar. Ever receiving cessation training increased significantly among medical students in Sri Lanka only, whereas, among dental students, it increased in India, Nepal, and Thailand.

CONCLUSION: Trends of tobacco use and exposure to SHS among medical and dental students in most countries of the South-East Asia Region had changed only relatively between the two rounds of GHPSS (2005-2006 and 2009-2011). No significant improvement was observed in the trend in schools with a policy banning smoking in school buildings and clinics. Almost all countries in the SEA Region that participated in GHPSS showed no significant change in ever having received formal training on tobacco cessation among medical and dental students.

PMID: 23442402 [PubMed - indexed for MEDLINE]


1.4. Educational Personnel and other professional groups

1.4.1. Global School Personnel Survey (GSPS)


1.5. Rural communities


Abstract

BACKGROUND: While the protective role of antioxidant nutrients against cancer is well established, data on Asian diets in patients with oral cancer are meagre.

METHODS: A total of 1029 subjects over 30 years of age were investigated on their dietary practices in the Sabaragamuwa province (Sri Lanka) in 2006-07. Data collection tools were an interviewer-administered questionnaire, a three-day food diary and an examination of the oral cavity. Subjects identified with Oral Potentially Malignant Disorders (OPMD) and disease-free controls were analysed in a case-control fashion. Among the OPMDs, those with leukoplakia were separately considered. A further subgroup analysis was undertaken for β-carotene-rich foods. The analysis was stratified by portions of fruit/vegetables consumed as five or more portions and two or more portions daily.

RESULTS: A low BMI (<18.5) was a significant independent risk factor for the development of OPMD. More than half of both cases and controls consumed less than two portions of fruit/vegetables per day and only 20 subjects consumed more than five portions per day. Intake of more than two portions per day of β-carotene-containing fruits/vegetables significantly reduced the risk of having an OPMD and leukoplakia (OR = 0.5; 95% CI, 0.3-0.9). The significant differences observed with BMI and fruits/vegetables were attenuated when adjusted for betel quid chewing, smoking and alcohol use.

CONCLUSIONS: This study discloses prevailing under-nutrition in this rural population with very low daily consumption of fruit/vegetables. Cancer preventive properties in their diets are limited and are swamped by the known carcinogenic agents associated with use of betel quid, tobacco and alcohol.

PMID: 23601045 [PubMed - indexed for MEDLINE]

Abstract

To comprehensively review the issues of smokeless tobacco use in Sri Lanka. This review paper is based on a variety of sources including Medline, WHO documents, Ministry of Health and Nutrition, Colombo and from other sources.

RESULTS: The prevalence of smokeless tobacco (SLT) use in Sri Lanka has been reported high, especially among rural and disadvantaged groups. Different smokeless tobacco products were not only widely available but also very affordable. An increasing popularity of SLT use among the youth and adolescents is a cause for concern in Sri Lanka. There were evidences of diverse benign, premalignant, and malignant oral diseases due to smokeless tobacco use in the country. The level of awareness about health risks related to the consumption of smokeless tobacco products was low, particularly among the people with low socio-economic status. In Sri Lanka various forms of smokeless tobacco products, some of them imported, are used. At the national level, 15.8% used smokeless tobacco products and its use is three-fold higher among men compared to women. Betel quid is by far the traditional form in which tobacco is a general component. Other manufactured tobacco products include pan parag/pan masala, Mawa, Red tooth powder, Khaini, tobacco powder, and Zarda. Some 8.6% of the youth are current users of smokeless tobacco. There are studies demonstrating the harmful effects of smokeless tobacco use, especially on the oral mucosa, however, the level of awareness of this aspect is low. The highest mean expenditure on betel quid alone in rural areas for those earning Rs. 5,000/month was Rs. 952. The core issue is the easy availability of these products. To combat the smokeless tobacco problem, public health programs need to be intensified and targeted to vulnerable younger age groups. Another vital approach should be to levy higher taxation.

PMID: 23442399 [PubMed - indexed for MEDLINE]


Abstract

Smokeless tobacco (SLT) use is an understudied problem in South-East Asia. Information on SLT use among the adult population was collected from various available sources. SLT use prevalence varies among countries in the region. The prevalence of SLT use is known for all countries at national level in the region with the exception of Bhutan and DPR Korea. For Bhutan, data pertains to Thimpu only. There is no available data on SLT use for DPR Korea. Using all available data from Bhutan, India, Myanmar, Nepal, and Sri Lanka, SLT use was found to be higher among males as compared to females; however, in Bangladesh, Indonesia, and Thailand, SLT use was higher among females as compared to males. Among males, prevalence of SLT use varied from 51.4% in Myanmar to 1.1% in Timor-Leste. Among females, the prevalence of SLT use varied from 27.9% in Bangladesh to 1.9% in Timor-Leste. The prevalence also varies in different parts of countries. For instance, the prevalence of current use of SLT in India ranges from 48.7% in Bihar to 4.5% in Himachal Pradesh. In Thailand, prevalence of current use of tobacco use varies from 0.8% in Bangkok to over 4% in the northern (4.1%) and northeastern (4.7%) region. Among all SLT products, betel quid was the most commonly used product in most countries including Bangladesh (24.3%) and Thailand (1.8%). However, Khaini (11.6%) chewing was practiced most commonly in India. Nearly 5% of the adult population used tobacco as dentifrice in Bangladesh and India. SLT is more commonly used in rural areas and among disadvantaged groups. Questions from standard "Tobacco Questions for Surveys (TQS)" need to be integrated in routine health system surveys in respective countries to obtain standardized tobacco use data at regular intervals that will help in providing trends of SLT use in countries.

PMID: 23442396 [PubMed - indexed for MEDLINE]


Abstract

Tobacco use is a serious public health problem in the South East Asia Region where use of both smoking and smokeless form of tobacco is widely prevalent. The region has almost one quarter of the global population and about one quarter of all smokers in the world. Smoking among men is high in the Region and women usually take to chewing tobacco. The prevalence across countries varies significantly with smoking among adult men ranges
from 24.3% (India) to 63.1% (Indonesia) and among adult women from 0.4% (Sri Lanka) to 15% (Myanmar and Nepal). The prevalence of smokeless tobacco use among men varies from 1.3% (Thailand) to 31.8% (Myanmar), while for women it is from 4.6% (Nepal) to 27.9% (Bangladesh). About 55% of total deaths are due to Non-communicable diseases (NCDs) with 53.4% among females with highest in Maldives (79.4%) and low in Timor-Leste (34.4%). Premature mortality due to NCDs in young age is high in the region with 60.7% deaths in Timor Leste and 60.6% deaths in Bangladesh occurring below the age of 70 years. Age standardized death rate per 100,000 populations due to NCDs ranges from 793 (Bhutan) and 612 (Maldives) among males and 654 (Bhutan) and 461 (Sri Lanka) among females respectively. Out of 5.1 million tobacco attributable deaths in the world, more than 1 million are in South East Asia Region (SEAR) countries. Reducing tobacco use is one of the best buys along with harmful use of alcohol, salt reduction and promotion of physical activity for preventing NCDs. Integrating tobacco control with broader population services in the health system framework is crucial to achieve control of NCDs and sustain development in SEAR countries.

PMID: 22089682 [PubMed - indexed for MEDLINE]


Abstract

OBJECTIVE: The aim of this study was to investigate the level of public awareness of oral cancer, of oral potentially malignant disorders (OPMD) and of risk factors for developing these diseases in a province of Sri Lanka, a country with one of the highest incidences of these diseases in the world.

METHODS: A cross-sectional community-based survey was carried out in Sabaragamuwa province by interviewing 1029 subjects above 30 years of age, over a 1-year period from November 2006.

RESULTS: The level of public awareness of oral cancer was 84%, but only 23% for OPMD. Awareness was especially poor in low socioeconomic groups. The majority of subjects were not aware of the symptoms of oral cancer and of OPMD. Thirty-two percent were unaware that chewing betel quid was a risk factor for these diseases, as were 65% for tobacco smoking and 81% for heavy consumption of alcohol. Overall, 76% were not aware of any of the dangers inherent in the frequent use of areca nut. The majority of smokers, betel quid chewers and alcohol consumers were not aware that their lifestyles were placing their long-term health at serious risk.

CONCLUSIONS: Knowledge of oral cancer, OPMD and their associated risk factors was poor among this population, indicating an urgent need to implement public health education and promotion strategies.

PMID: 20735449 [PubMed - indexed for MEDLINE]


Abstract

OBJECTIVES: To investigate the prevalence and consumption of tobacco and alcohol among males in the Colombo and Polonnaruwa districts.

DESIGN: A cross-sectional study based on multistage cluster sampling was carried out in four Medical Officer of Health (MOH) areas in the Colombo (urban) and Polonnaruwa (rural) districts to assess the prevalence of tobacco and alcohol use. The Public Health Midwife areas were considered as primary clusters. The sample consisted of males over 18 years. There were 1318 from the Colombo District and 1366 from the Polonnaruwa District. The quantity frequency method was used to assess consumption. RESULTS: Abstinence was significantly higher in the rural areas (75.2%) compared to urban areas (56.6%) (p < 0.001). Prevalence of current drinking in the urban areas (32.9%) was significantly higher than in rural areas (20.8%) (p < 0.001). Alcohol consumption in the urban areas (33.1 units/week) was significantly higher than in rural areas (20.9) (p < 0.004). 51.6/1000 males in the urban areas and 14.6/1000 males in rural areas consumed daily. The prevalence of current smoking was also higher in the urban areas (29.9%) than (p = 0.052) in rural areas (24.4%).

An annotated bibliography of scientific studies done on tobacco topic in WHO South-East Asia Region countries 413
CONCLUSION: High-risk alcohol consumption was prevalent especially in urban areas as indicated by the mean alcohol consumption and number who consumed spirits daily. The prevalence of smoking is much lower than in many Asian countries but similar to western Europe.

PMID: 20052853 [PubMed - indexed for MEDLINE]

1.6. Urban communities


Abstract

OBJECTIVES: To investigate the prevalence and consumption of tobacco and alcohol among males in the Colombo and Polonnaruwa districts.

DESIGN: A cross-sectional study based on multistage cluster sampling was carried out in four Medical Officer of Health (MOH) areas in the Colombo (urban) and Polonnaruwa (rural) districts to assess the prevalence of tobacco and alcohol use. The Public Health Midwife areas were considered as primary clusters. The sample consisted of males over 18 years. There were 1318 from the Colombo District and 1366 from the Polonnaruwa District. The quantity frequency method was used to assess consumption.

RESULTS: Abstinence was significantly higher in the rural areas (75.2%) compared to urban areas (56.6%) (p < 0.001). Prevalence of current drinking in the urban areas (32.9%) was significantly higher than in rural areas (20.8%) (p < 0.001). Alcohol consumption in the urban areas (33.1 units/week) was significantly higher than in rural areas (20.9) (p < 0.004). 51.6/1000 males in the urban areas and 14.6/1000 males in rural areas consumed daily. The prevalence of current smoking was also higher in the urban areas (29.9%) than (p = 0.052) in rural areas (24.4%).

CONCLUSION: High-risk alcohol consumption was prevalent especially in urban areas as indicated by the mean alcohol consumption and number who consumed spirits daily. The prevalence of smoking is much lower than in many Asian countries but similar to western Europe.

PMID: 20052853 [PubMed - indexed for MEDLINE]

1.7. Women


Summary

This "Brief Profile on Gender and Tobacco in South-East Asia Region" emphasizes the need for a gender-specific approach to tobacco control. It urges Member States to take measures to address gender-specific issues when developing tobacco control strategies. It also describes the situation, challenges and opportunities related to gender and tobacco use in the Region.


1.8. General population


Abstract

The adverse health effects of tobacco and alcohol are well known. Alcohol consumption is increasing in Sri Lanka, but few population studies have been conducted. The objective of this study was to document tobacco and alcohol consumption levels among adults in southern Sri Lanka and to identify the main reasons for using or refraining from alcohol and tobacco products. Tobacco and alcohol use within Sri Lanka is relatively common, particularly among adult males. Reasons given for smoking and drinking frequently relate to social and image-based motivators. Women may be especially susceptible to the influence of peer pressure in social situations.
Public health efforts should consider the use of demographic-specific anti-tobacco and anti-alcohol messages, as the motivators driving behavior appear to differ across gender and age groups.

PMID: 24437324 [PubMed - indexed for MEDLINE] PMCID: PMC4169263


Abstract

OBJECTIVES: This study aimed to determine the prevalence and underlying sociodemographic correlates of smoking among Sri Lankans.

METHODS: A cross-sectional sample (N = 5000, age > 18 years) was selected using a multistage random cluster sampling. Data were collected using an interviewer-administered questionnaire.

RESULTS: Response rate was 91% (n = 4532); males 40%; mean age 46.1 years (±15.1). Overall, urban and rural prevalence of current smoking (smoking) was 18.3%, 17.2%, and 18.5%, respectively (P = nonsignificant, urban vs rural). Smoking was much higher in males than in females (38.0% vs 0.1%, P < .0001). Ex-smokers comprised 10.0% (males 20.7%, females 0.1%, P < .0001). Among the smokers 87.0% smoked <10 cigarettes per day. The male age groups < 20 and 20 to 29 years had the lowest (15.6%) and the highest (44.6%) prevalence of smoking, respectively. In males, smoking was highest in the least educated (odds ratio = 1.96, P = .001).

CONCLUSIONS: Smoking is common among Sri Lankan males and is associated with lower education, income, and middle age.

PMID: 20460291 [PubMed - indexed for MEDLINE]


Abstract

BACKGROUND: Oral submucous fibrosis (OSMF) is a chronic, insidious, disabling potentially malignant condition of the oral mucosa seen predominantly in south and Southeast Asia. No reports are hitherto available on the aetiological factors of OSMF based on Sri Lankan patients.

METHODS: A total of 74 patients with OSMF and 74 controls who consecutively attended the Oral Medicine clinic at the Dental Hospital (Teaching) Faculty of Dental Sciences, University of Peradeniya, Sri Lanka were included in the study. Binary logistic regression analyses were performed to model the influence of betel chewing, smoking and alcohol use and to determine the effects of different combinations of chewing habits on OSMF.

RESULTS: Betel chewing was the only significantly associated factor in the aetiology of OSMF (OR = 171.83, 95% CI: 36.35-812.25). There were no interaction effects of chewing, smoking and alcohol consumption in the causation of OSMF.

CONCLUSION: The present study has shown a strong association of betel quid chewing (including tobacco as an ingredient) with the causation of OSMF.

PMID: 16519765[PubMed - indexed for MEDLINE]

Abstract

A questionnaire was administered to 1565 adults to identify the prevalence of smoking and to assess respondents' attitudes toward smoking. Of men 41% were yearly smokers, 27.8% were monthly smokers and 21% were daily smokers. The corresponding figures for women were 3.4%, 2% and 0.6% respectively. Higher prevalence rates were observed among less educated, middle-aged men who were from underprivileged families. About 23% of men and 0.9% of women were monthly alcohol users. Alcohol use seems to be positively associated with smoking. A considerable portion of both smokers and non-smokers expressed a favorable attitude towards smoking habits of adult males (40.1% of smokers and 12.8% of non-smokers) and towards the tobacco industry (25.1% of smokers and 13.1% of non-smokers). Since the majority of people in Sri Lanka are non-smokers, attitudinal support given by them in promoting smoking in the society needs to be addressed effectively in smoking control interventions.

PMID: 16044832 [PubMed - indexed for MEDLINE]

2. Tobacco related Mortality & Morbidity


Abstract

BACKGROUND: Secondhand smoke accounts for a considerable proportion of deaths due to tobacco smoke. Although the existing laws ban indoor smoking in public places in Sri Lanka, the level of compliance is unknown.

METHODS: Fine particulate matter (PM (2.5)) levels in 20 public places in Colombo, Sri Lanka were measured by a PM monitor (Model AM510-SIDEPAK Personal Aerosol Monitor). Different types of businesses (restaurants, bars, cafés, and entertainment venues) were selected by purposive sampling. Only the places where smoking was permitted were considered.

RESULTS: The average indoor PM (2.5) ranged from 33 to 299 µg/m (3). The average outdoor PM (2.5) ranged from 18 to 83 µg/m (3). The indoor to outdoor PM (2.5) ratio ranged from 1.05 to 14.93. In all venues, indoor PM (2.5) levels were higher than the Sri Lankan ambient PM (2.5) standard of 50 µg/m (3). All indoor locations had higher PM (2.5) levels as compared to their immediate outdoor surroundings.

CONCLUSION: The study highlights the importance of improving ventilation and enforcing laws to stop smoking in public places.

PMID: 22473526 [PubMed - indexed for MEDLINE] PMCID: PMC3432657


Abstract

Tobacco use is a serious public health problem in the South East Asia Region where use of both smoking and smokeless form of tobacco is widely prevalent. The region has almost one quarter of the global population and about one quarter of all smokers in the world. Smoking among men is high in the Region and women usually take to chewing tobacco. The prevalence across countries varies significantly with smoking among adult men ranges from 24.3% (India) to 63.1% (Indonesia) and among adult women from 0.4% (Sri Lanka) to 15% (Myanmar and Nepal). The prevalence of smokeless tobacco use among men varies from 1.3% (Thailand) to 31.8% (Myanmar), while for women it is from 4.6% (Nepal) to 27.9% (Bangladesh). About 55% of total deaths are due to Non communicable diseases (NCDs) with 53.4% among females with highest in Maldives (79.4%) and low in Timor-Leste (34.4%). Premature mortality due to NCDs in young age is high in the region with 60.7% deaths in Timor Leste and 60.6% deaths in Bangladesh occurring below the age of 70 years. Age standardized death rate per 100,000 populations due to NCDs ranges from 793 (Bhutan) and 612 (Maldives) among males and 654 (Bhutan) and 461 (Sri Lanka) among females respectively. Out of 5.1 million tobacco attributable deaths in the world, more than 1 million are in South East Asia Region (SEAR) countries. Reducing tobacco use is one of the best buys
along with harmful use of alcohol, salt reduction and promotion of physical activity for preventing NCDs. Integrating tobacco control with broader population services in the health system framework is crucial to achieve control of NCDs and sustain development in SEAR countries.

PMID: 22089682 [PubMed - indexed for MEDLINE]

2.1. Cancers related to tobacco use

2.1.1. Head and Neck cancers


Abstract

The prevalence of oral cancers (OC) is high in Asian countries, especially in South and Southeast Asia. Asian distinct cultural practices such as betel-quid chewing, and varying patterns of tobacco and alcohol use are important risk factors that predispose to cancer of the oral cavity. The aim of this review is to provide an update on epidemiology of OC between 2000 and 2012. A literature search for this review was conducted on Medline for articles on OC from Asian countries. Some of the articles were also hand searched using Google. High incidence rates were reported from developing nations like India, Pakistan, Bangladesh, Taiwan and Sri Lanka. While an increasing trend has been observed in Pakistan, Taiwan and Thailand, a decreasing trend is seen in Philippines and Sri Lanka. The mean age of occurrence of cancer in different parts of oral cavity is usually between 51-55 years in most countries. The tongue is the leading site among oral cancers in India. The next most common sites in Asian countries include the buccal mucosa and gingiva. The 5 year survival rate has been low for OC, despite improvements in diagnosis and treatment. Tobacco chewing, smoking and alcohol are the main reasons for the increasing incidence rates. Low socioeconomic status and diet low in nutritional value lacking vegetables and fruits contribute towards the risk. In addition, viral infections, such as HPV and poor oral hygiene, are other important risk factors. Hence, it is important to control OC by screening for early diagnosis and controlling tobacco and alcohol use. It is also necessary to have cancer surveillance at the national-level to collect and utilise data for cancer prevention and control programs.

PMID:24289546[PubMed - indexed for MEDLINE]


Abstract

BACKGROUND: While the protective role of antioxidant nutrients against cancer is well established, data on Asian diets in patients with oral cancer are meagre.

METHODS: A total of 1029 subjects over 30 years of age were investigated on their dietary practices in the Sabaragamuwa province (Sri Lanka) in 2006-07. Data collection tools were an interviewer-administered questionnaire, a three-day food diary and an examination of the oral cavity. Subjects identified with Oral Potentially Malignant Disorders (OPMD) and disease-free controls were analysed in a case-control fashion. Among the OPMDs, those with leukoplakia were separately considered. A further subgroup analysis was undertaken for β-carotene-rich foods. The analysis was stratified by portions of fruit/vegetables consumed as five or more portions and two or more portions daily.

RESULTS: A low BMI (<18.5) was a significant independent risk factor for the development of OPMD. More than half of both cases and controls consumed less than two portions of fruit/vegetables per day and only 20 subjects consumed more than five portions per day. Intake of more than two portions per day of β-carotene-containing fruits/vegetables significantly reduced the risk of having an OPMD and leukoplakia (OR = 0.5; 95% CI, 0.3-0.9). The significant differences observed with BMI and fruits/vegetables were attenuated when adjusted for betel quid chewing, smoking and alcohol use.
CONCLUSIONS: This study discloses prevailing under-nutrition in this rural population with very low daily consumption of fruit/vegetables. Cancer preventive properties in their diets are limited and are swamped by the known carcinogenic agents associated with use of betel quid, tobacco and alcohol.

PMID: 23601045 [PubMed - indexed for MEDLINE]


Abstract


MATERIALS AND METHODS: Data on oral and oropharyngeal cancers were obtained from the published hospital-based cancer registry reports in the years 1985, 1990, 1995, 2000, and 2005. The data were analyzed by gender, age (<40 or >40 years), and by site. A linear regression analysis was performed on the age-standardized oral and oropharyngeal cancer incidence rates to examine the trends over a 20-year period.

RESULTS: There was a steady decline in the age-standardized incidence of lip and oral cavity cancers over the past 20 years in both men and women. A significant reduction of 1.9% per year is noted over this period. Contrary to this, cancers of the oropharynx (C09, C10, and C14) showed a slight increase over the same period.

CONCLUSIONS: Reversal of betel quid use and smoking must be considered in accounting for declining trends for oral cancer. Increasing rates of oropharyngeal cancer raises the issue whether risk factors for the oropharynx are different to those of the oral cavity, and this may need further investigation.

PMID: 21762396 [PubMed - indexed for MEDLINE]


Abstract

OBJECTIVE: The aim of this study was to investigate the level of public awareness of oral cancer, of oral potentially malignant disorders (OPMD) and of risk factors for developing these diseases in a province of Sri Lanka, a country with one of the highest incidences of these diseases in the world.

METHODS: A cross-sectional community-based survey was carried out in Sabaragamuwa province by interviewing 1029 subjects above 30 years of age, over a 1-year period from November 2006.

RESULTS: The level of public awareness of oral cancer was 84%, but only 23% for OPMD. Awareness was especially poor in low socioeconomic groups. The majority of subjects were not aware of the symptoms of oral cancer and of OPMD. Thirty-two percent were unaware that chewing betel quid was a risk factor for these diseases, as were 65% for tobacco smoking and 81% for heavy consumption of alcohol. Overall, 76% were not aware of any of the dangers inherent in the frequent use of areca nut. The majority of smokers, betel quid chewers and alcohol consumers were not aware that their lifestyles were placing their long-term health at serious risk.

CONCLUSIONS: Knowledge of oral cancer, OPMD and their associated risk factors was poor among this population, indicating an urgent need to implement public health education and promotion strategies.

PMID: 20735449 [PubMed - indexed for MEDLINE]

Abstract

BACKGROUND: Oral and pharyngeal cancers constitute the sixth most common type of cancer globally, with high morbidity and mortality. In many countries, most cases of oral cancer arise from long-standing, pre-existing lesions, yet advanced malignancies prevail. A new approach to early detection is needed. We aimed to validate a model for screening so that only high-risk individuals receive the clinical examination.

METHODS: A community-based case-control study (n=1029) in rural Sri Lanka assessed risk factors and markers for oral potentially malignant disorders (OPMD) by administering a questionnaire followed by an oral examination. We then developed a model based on age, socioeconomic status and habits of betel-quid chewing, alcohol drinking and tobacco smoking, with weightings based on odds ratios from the multiple logistic regression. A total, single score was calculated per individual. Standard receiver-operator characteristic curves were plotted for the total score and presence of OPMD. The model was validated on a new sample of 410 subjects in a different community.

RESULTS: A score of 12.0 produced optimal sensitivity (95.5%), specificity (75.9%), false-positive rate (24.0%), false-negative rate (4.5%), positive predictive value (35.9%) and negative predictive value (99.2%).

CONCLUSION: This model is suitable for detection of OPMD and oral cancer in high-risk communities, for example, in Asia, the Pacific and the global diaspora therefrom. A combined risk-factor score of 12.0 was optimal for participation in oral cancer/OPMD screening in Sri Lanka. The model, or local adaptations, should have wide applicability.

PMID: 20628386 [PubMed - indexed for MEDLINE] PMC:PMC2920027


Abstract

We investigated the prevalence of, and risk factors for, oral potentially malignant disorders (OPMDs) in rural Sri Lanka. A cross-sectional community-based study was conducted by interview and oral examination of 1029 subjects aged over 30 years. A community-based nested case-control study then took those with OPMDs as 'cases', "controls" being those with no oral abnormalities at time of initial screening. The prevalence of OPMD was 11.3% (95% CI: 9.4-13.2), after weighting for place of residence and gender. Risk factors were betel-quid (BQ) chewing daily [OR=10.6 (95% CI: 3.6-31.0)] and alcohol drinking daily or weekly [OR=3.55 (1.6-8.0)]. A significant dose-response relationship existed for BQ chewing. Smoking did not emerge when adjusted for covariates. A synergistic effect of chewing and alcohol consumption existed. The attributable risk (AR) of daily BQ chewing was 90.6%, the population AR 84%. This study demonstrates high prevalence of OPMD, betel-quid chewing with or without tobacco being the major risk factor.

PMID:20189448[PubMed - indexed for MEDLINE]
METHODS: We undertook oral mucosal examinations of labourers employed in tea estate plantations in Sri Lanka. In a two-stage screening procedure, first by estate medical officers and then by visiting specialists, we examined 12,716 persons at their workplaces achieving a coverage of one-sixth of the total workforce.

RESULTS: Fourteen oral cancers and 848 subjects with oral pre-cancer (6.7%) were detected giving population prevalences of 46.1 per 1000 for leukoplakia and 16.4 per 1000 for oral submucous fibrosis. Among subjects with any oral mucosal disorder (n = 1159) proportions of current users of betel quid, smokers and alcohol use was recorded at 92%, 31% and 61% respectively. The synergistic effect of these three risk habits on the development of oral leukoplakia was evident in mixed habit groups.

CONCLUSIONS: The prevalence of oral pre-cancer in tea estate labourers was higher than estimates reported in previous studies. In the absence of state-sponsored preventive activities, it is necessary to improve the capacity of individual health practitioners and small medical centres to participate in oral health promotion and oral cancer/pre-cancer screening.

PMID: 17944750 [PubMed - indexed for MEDLINE]


Abstract

Oral squamous cell carcinoma (OSCC) is a major oncological problem in many regions of the world where tobacco habits are practiced in the form of chewing and/or smoking with or without alcohol intake. It accounts for 16.5% of all cancers in Sri Lankan patients with a male:female ratio of 4:1. In Sri Lanka nearly 5% of OSCC are diagnosed in young patients. This comparative study describes, demographic, aetiological and survival data from young and old patients with OSCC (n=56). Both younger and older groups showed a marked male predilection (male: female ratio was 4:1 and 3.7:1 in younger and older groups respectively). Tongue was the commonest site for younger group (41%, P<0.01) whilst buccal mucosa (37.5%, P<0.05) and alveolar mucosa (25%, P<0.01) were for older group. 39% of cancers in younger group were not associated with any identifiable risk factor (P<0.01) and 70% of SCC of the tongue has no associated habits (P<0.01). SCC of the tongue in the younger group shows poor prognosis than the older patients. Three-year survival rate for the total number showed no significant difference in two age groups. Survival appeared to be better in patients without associated habits in the older group.

PMID: 16527511 [PubMed - indexed for MEDLINE]


Abstract

OBJECTIVE: To assess awareness about oral cancer and precancer among patients attending for dental treatment at a University Dental hospital.

METHODS AND MATERIALS: A self-administered questionnaire was used to collect information from 410 randomly selected outpatients attended the Dental Hospital (teaching), Faculty of Dental Sciences, University of Peradeniya, Sri Lanka. The questionnaire included questions to ascertain information on socio-demographic parameters, awareness of oral cancer and precancer, habits of betel chewing, smoking and alcohol consumption.

RESULTS: Ninety five percent of the respondents were aware of the possibility of occurrence of cancer in the mouth while only 44.9% (n=184) were aware about precancer. Of the 390 individuals who were aware of the existence of oral cancer, 80.7% were knowledgeable about the causal relationship between betel chewing habit and oral cancer. Forty-seven and 17 percent were aware of links with tobacco smoking and alcohol consumption, respectively. However, out of those who had knowledge of oral cancer, 18 % (n=69) were not knowledgeable about associations with habits.
CONCLUSIONS: This survey revealed that the patients attending the hospital were well informed about oral cancer. However, awareness about precancer was relatively low. Knowledge about the causal relationships with tobacco smoking and use of alcohol was low compared to that for betel chewing.

PMID:15780034[PubMed - indexed for MEDLINE]

2.1.2. Other cancers


Abstract

PURPOSE: To investigate the incidence of bladder cancer (BC) in Sri Lanka and to compare risk factors and outcomes with those of other South Asian nations and South Asian migrants to the United Kingdom (UK) and the United States (US).

MATERIALS AND METHODS: The incidence of BC in Sri Lanka was examined by using two separate cancer registry databases over a 5-year period. Smoking rates were compiled by using a population-based survey from 2001 to 2009 and the relative risk was calculated by using published data.

RESULTS: A total of 637 new cases of BC were diagnosed over the 5-year period. Sri Lankan BC incidence increased from 1985 but remained low (1.36 and 0.3 per 100,000 in males and females) and was similar to the incidence in other South Asian countries. The incidence was lower, however, than in migrant populations in the US and the UK. In densely populated districts of Sri Lanka, these rates almost doubled. Urothelial carcinoma accounted for 72%. The prevalence of male smokers in Sri Lanka was 39%, whereas Pakistan had higher smoking rates with a 5-fold increase in BC.

CONCLUSIONS: Sri Lankan BC incidence was low, similar to other South Asian countries (apart from Pakistan), but the actual incidence is likely higher than the cancer registry rates. Smoking is likely to be the main risk factor for BC. Possible under-reporting in rural areas could account for the low rates of BC in Sri Lanka. Any genetic or environmental protective effects of BC in South Asians seem to be lost on migration to the UK or the US and with higher levels of smoking, as seen in Pakistan.

PMID:22670188[PubMed] PMCID:PMC3364468


Abstract

OBJECTIVE: The main aim of this study was to evaluate the awareness of cervix cancer risk factors among Educated Youth with respect to socio demographic factors.

MATERIALS AND METHODS: A cross-sectional questionnaire survey was carried out among 1268 female undergraduate students in Delhi, Mangalore (India), Pokhara (Nepal) and Kandy (Srilanka) between 25 April 2010 and 20 August 2010 using structured questionnaire containing details of awareness of cervix cancer risk factors and socio demographic details. Descriptive statistics and testing of hypothesis were used for the analysis. Data analyzed using EPI INFO and SPSS 16 software.

RESULTS: In the 1,268 subjects, the mean age of Indian (528, 41.6%), Nepalese (480, 37.9%) and Srilankan (260, 20.5%) were 18.3 ± SD 0.7, 18.6 ± SD 0.8 and 18.0 ± SD 1.5 years, respectively. Distribution of students according to religion varied across the countries. Majority of the students were Hindus in India (61.4%) and Nepal (89.6%) while in Srilanka the majority (53.8%) were Buddhist. Relationships could be established between nationality and risk factors viz. awareness regarding cervix cancer (p= 0.024), sexual activity at an early age (before 16) can cause cervix cancer (p=0.0001), multiple sex partners can cause cervix cancer (p=0.001), condom/other birth control measures cant prevent HPV infection (p=0.0001), smoking as a risk factor(p=0.0001), hereditary risk factor (p=0.015), and first degree relative (p=0.0001).
CONCLUSION: These results indicate that there is an urgent need for a reinvigorated and tailored approach to cervix cancer prevention among the educated youth in India, Nepal and Sri Lanka. Prevention efforts should be focused on improving social awareness, enforcing education strategies to reduce risk factors and improving the strength and quality of counselling.

PMID:22126549[PubMed - indexed for MEDLINE]

2.2. Non-cancerous diseases

2.2.1. Cardiovascular diseases


Abstract

BACKGROUND: Cardiovascular Disease (CVD) is a major cause of mortality worldwide. Control and reduction of cardiovascular risk factors such as elevated blood pressure, high cholesterol levels, excess of body weight, smoking and lack of exercise can contribute to a reduction of CVD mortality.

METHODS: A standardized questionnaire was administered to all medical officers willing to participate in the study, who were working in the Cardiology Units all over Sri Lanka to assess the source of continuous medical education, attitudes on secondary prevention, barriers to secondary prevention and knowledge assessment of secondary prevention of cardiovascular diseases. Chi square was used to compare groups and p < 0.05 was considered significant.

RESULTS: 132 participants with equal numbers of males and female doctors participated. While 56 doctors have had no training in cardiology, 75 doctors have had some training in a cardiology unit. The barriers for secondary prevention were, poor knowledge/understanding of patients 3.82 (1.06), too many drugs 3.74 (0.98), presence of co-morbid conditions 3.68(0.97), cost of medications 3.69 (0.97) and poor adherence to prevention strategies by patients 3.44 (1.15). Routine clinic visits 85 (65%) and public awareness day seminars 30 (22.2%) were the most effective methods of secondary prevention. Guidelines were the most popular method of continuous medical education. Those who have had some training in cardiology did not differ in their knowledge from those who have never had training in cardiology. Knowledge about prevention with regard to diet was inadequate and exercise and lipids were adequate but not good. Rates of knowledge on smoking cessation were much higher than for other CVD risk factors.

CONCLUSION: There needs to be more adherences to clinical guidelines and attention paid to CVD prevention, in particular, the importance of dietary modifications, adequate exercise, and lipid control.

PMID:24903262[PubMed - indexed for MEDLINE] PMCID:PMC4057928

2.2.2. Diabetes


Abstract

BACKGROUND: At present there are no large scale nationally-representative studies from Sri Lanka on the prevalence and associations of Diabetic Retinopathy (DR). The present study aims to evaluate the prevalence and risk factors for DR in a community-based nationally-representative sample of adults with self-reported diabetes mellitus from Sri Lanka.

METHODS: A cross-sectional community-based national study among 5,000 adults (≥18 years) was conducted in Sri Lanka, using a multi-stage stratified cluster sampling technique. An interviewer-administered questionnaire was used to collect data. Ophthalmological evaluation of patients with 'known' diabetes (previously diagnosed at a government hospital or by a registered medical practitioner) was done using indirect ophthalmoscopy. A binary-logistic regression analysis was performed with 'presence of DR' as the dichotomous dependent variable and other independent covariates.
RESULTS: Crude prevalence of diabetes was 12.0% (n = 536), of which 344 were patients with 'known' diabetes. Mean age was 56.4 ± 10.9 years and 37.3% were males. Prevalence of any degree of DR was 27.4% (Males - 30.5%, Females - 25.6%; p = 0.41). In patients with DR, majority had NPDR (93.4%), while 5.3% had maculopathy. Patients with DR had a significantly longer duration of diabetes than those without. In the binary-logistic regression analysis in all adults duration of diabetes (OR: 1.07), current smoking (OR: 1.67) and peripheral neuropathy (OR: 1.72) all were significantly associated with DR.

CONCLUSIONS: Nearly 1/3rd of Sri Lankan adults with self-reported diabetes are having retinopathy. DR was associated with diabetes duration, cigarette smoking and peripheral neuropathy. However, further prospective follow up studies are required to establish causality for identified risk factors.

PMID:25142615[PubMed - indexed for MEDLINE] PMCID:PMC4141126


Abstract

Prevalence of diabetes mellitus (DM) has reached epidemic proportions in Sri Lanka. Presently there are studies on the community prevalence of distal peripheral neuropathy (DPN) in Sri Lanka. We describe prevalence, patterns and predictors of DPN in patients with DM in Sri Lanka. Data were collected as part of a national study on DM. In new cases DPN was assessed using the Diabetic-Neuropathy-Symptom (DNS) score, while in those with established diabetes both DNS and Toronto-Clinical-Scoring-System (TCSS) were used. A binary logistic-regression analysis was performed with 'presence of DPN' as the dichotomous dependent variable and other independent co-variants. The study included 528 diabetic patients (191-new cases), with a mean age of 55.0 ± 12.4 years and 37.3% were males, while 18% were from urban areas. Prevalence of DPN according to DNS score among all patients, patients with already established diabetes and newly diagnosed patients were 48.1%, 59.1% and 28.8% respectively. Prevalence of DPN in those with established DM as assessed by TCSS was 24% and the majority had mild DPN (16.6%). The remainder of the abstract is based on subjects with established DM. The prevalence of DPN in males and female was 20.0% and 26.4% respectively. The mean age of those with and without DPN was 62.1 ± 10.8 and 55.1 ± 10.8 years respectively (p < 0.001). The majority of those with DPN were from rural-areas (75.3%) and earned a monthly income < Sri Lankan Rupees 12,000 (87.6%). In the binary logistic-regression presence of foot ulcers (OR: 10.4; 95%CI 1.8-16.7), female gender (OR: 6.7; 95%C 2.0-9.8) and smoking (OR: 5.9; 95%CI 1.4-9.7) were the strongest predictors followed by insulin treatment (OR: 4.3; 95%CI 1.3-6.9), diabetic retinopathy (OR: 2.7; 95%CI 1.3-5.4), treatment with sulphonylureas (OR: 1.8; 95%CI 1.1-2.3), increasing height (OR: 1.8; 95%CI 1.2-2.4), rural residence (OR: 1.8; 95%CI 1.1-2.5), higher levels of triglycerides (OR: 1.6; 95%CI 1.2-2.0) and longer duration of DM (OR: 1.2; 95%CI 1.1-1.3). There is a high prevalence of DPN among Sri Lankan adults with diabetes. The study defines the impact of previously known risk factors for development of DPN and identifies several new potential risk factors in an ethnically different large subpopulation with DM.

PMID:22642973[PubMed] PMCID:PMC3408375

2.2.3. Other diseases


Abstract

AIM: No long-term studies have reported on risk factors for tooth loss in subjects without home or professional dental care. The purpose of this report is to identify potential risk factors for tooth loss among male Sri Lankan tea labourers who participated in a 20-year investigation of the natural history of periodontal disease.

MATERIAL AND METHODS: Data for this report were obtained from the 455 subjects who participated in multiple examinations over the 20-year period from 1970 to 1990. Analyses included data from interim examinations in 1971, 1973, 1977, 1982 and 1985. Oral health assessments included the following: (1) attachment levels in millimetres on all mesial and mesio-buccal surfaces, excluding third molars; (2) plaque index; (3) gingival index; (4) calculus index; (5) caries index; and (6) missing teeth. Other variables included age, history of smoking and betel nut use. Statistical analyses included descriptive statistics and multivariate repeated-measures modelling with generalized estimating equations.
RESULTS: Tooth loss was significantly dependent upon interactions between the mean attachment loss and betel nut use ($Z=3.40; p=0.0007$) and history of missing teeth ($Z=3.70; p=0.0002$). The effect of attachment loss on tooth loss was increased in the presence of betel nut and diminished when teeth were already missing at baseline.

CONCLUSION: History of missing teeth, betel nut use and increasing attachment loss were significant predictors of tooth loss over time. Betel nut use increased the effect of attachment loss on loss of teeth, while history of missing teeth diminished the effect of attachment loss on tooth loss.

PMID: 16104963 [PubMed - indexed for MEDLINE]

3. Tobacco control interventions (including policies, legislations and taxation)


Abstract

The tobacco epidemic is an increasing threat to public health with the tobacco burden particularly high in WHO's South-East Asia Region (SEAR). The Region has many obstacles to tobacco control, but despite these challenges, significant progress has been made in many countries. Although much work still needs to be done, SEAR countries have nevertheless implemented strong and often innovative tobacco control measures that can be classified as "best practices," with some setting global precedents. The best practice measures implemented in SEAR include bans on gutka, reducing tobacco imagery in movies, and warning about the dangers of tobacco. In a time of scarce resources, countries in SEAR and elsewhere must ensure that the most effective and cost-efficient measures are implemented. It is hoped that countries can learn from these examples and as appropriate, adapt these measures to their own specific cultural, social and political realities.

PMID: 23442393 [PubMed - indexed for MEDLINE]


Abstract

INTRODUCTION: Sri Lanka became a signatory to the WHO Frame Work Convention on Tobacco Control in September 2003, and this was ratified in November 2003. With a view to reduce the use of tobacco in Sri Lanka, the National Authority on Tobacco and Alcohol Act (NATA) No. 27 of 2006 was implemented.

AIM: To assess the behavior changes related to tobacco use among adolescents and young adults following exposure to tobacco control measures were implemented by NATA.

MATERIALS AND METHODS: A case-control study was conducted on 42 adolescent (aged 13-19 years) and 156 young adult (aged 20-39 years) men living in Anuradhapura Divisional Secretary area in Sri Lanka. Cases (current quitters) and controls (current smokers) were compared to ascertain the outcome following the exposure to tobacco control measures. A self-administered questionnaire and focus group discussions were used to ascertain the exposure status in cases and controls. Confounding was controlled by stratification and randomization. Univariate analysis was performed by Backward Stepwise (Likelihood Ratio) method.

RESULTS: Among 198 respondents, 66 (27.3% adolescents and 72.7% young adults) were quitters, while 132 smokers (18.2% adolescents and 81.8% young adults) were current smokers. Exposure to the anti-smoking media messages revealed that TV was the strongest media that motivated smokers to quit smoking. Majority (66%) of cases and control were not exposed to tobacco promotion advertisements, while 47% of the cases and 50% of the control had never seen tobacco advertisements during community events. All cases (66) as well as 89% (118) of the control had not noticed competitions or prizes sponsored by tobacco industry during last year ($P = 0.13$).
CONCLUSION: Tobacco control measures implemented by NATA had a favorable influence on behavior change related to smoking among quitters and current smokers.

PMID: 23442410 [PubMed - indexed for MEDLINE]


Abstract

The 11 member states of WHO's South-East Asia Region share common factors of high prevalence of tobacco use, practice of several forms of tobacco use, increasing prevalence of tobacco use among the youth and women, link of tobacco use with poverty, and influence of tobacco advertisements in propagating the use of tobacco, especially among young girls and women. The effects of tobacco use are many-fold, leading to high morbidity and mortality rates as well as loss of gross domestic product (GDP) to respective countries. The WHO Regional Office for South-East Asia has been actively involved in curbing this menace essentially by way of assisting member states in implementing the WHO Framework Convention on Tobacco Control (FCTC). This paper gives an overview of these activities and discusses the opportunities and challenges in implementing the FCTC and possible practical solutions.

PMID: 23442401 [PubMed - indexed for MEDLINE]


Summary

This Regional Strategy for Tobacco Control primarily provides a longer-term strategic guidance to Member States of the South-East Asia Region to support them in formulating evidence-based policies and designing a sustained and cost-effective programme on tobacco control to counter successfully the rising public health concerns of tobacco use in the Region. The Region is home to around 250 million smokers and nearly the same number of smokeless tobacco users. About 1.3 million deaths occur every year, including around 160 000 deaths due to exposure to second-hand smoke. The increasing trend of tobacco use and its devastating effects pose a grave threat to the health and well-being of the people of the Region. Thus, the implementation of the Regional Strategy is expected to eventually protect the people of the Region from the enormous negative health, social, economic and environmental consequences of tobacco consumption and exposure to tobacco smoke.


Summary

This profile on the implementation of the WHO Framework Convention on Tobacco Control in the South-East Asia Region provides an overview of the status of the implementation of the convention in the eleven Member States of the SEA Region. It highlights some major milestones achieved as well as the challenges faced while implementing tobacco control measures in Member countries.


Summary

Smokeless tobacco consumption in the South-East Asia Region is a growing threat to health. The region is a hub for smokeless tobacco production and use. This category of tobacco product is manufactured in various forms.
The diversity of these tobacco products, their availability and affordability make them obvious alternatives to the relatively more expensive cigarettes. However, the dangers and risks associated with smokeless tobacco are not well understood by the population. Smokeless tobacco is not perceived as an urgent threat in many of the Member countries and consequently, tobacco control efforts for this type of tobacco use are not intense. The tobacco control agenda needs to keep up the pressure and apply a wider approach and holistic strategies to address this issue. To this end, the "Expert Group Meeting on Smokeless Tobacco Control and Cessation" was convened in New Delhi, India, on 16-17 August 2011. The meeting allowed experts to share information, identify the next steps on smokeless tobacco control and cessation, and provide inputs to a policy paper to be published later. This report compiles the issues faced by Member States concerning smokeless tobacco and provides recommendations to policy-makers and stakeholders.


Summary

Tobacco Cessation: A Manual for Nurses, Health Workers and other Health Professionals is a comprehensive manual on tobacco cessation. It provides a detailed overview of the extent and patterns of use of tobacco products in the South-East Asia (SEA) Region and the related health burden. Among the top 10 countries globally with the highest levels of tobacco use among males, as many as three are from the SEA Region. The Manual highlights the need to provide tobacco cessation interventions by nurses, health workers and other health professionals, and graphically depicts the adverse health effects of tobacco on almost all organs of the human body. In the section on interventions, the Manual reiterates that tobacco cessation efforts start with the successful identification of tobacco use. It provides effective tools and techniques for tobacco cessation interventions, including visits and follow-up of patients, listing of pros and cons, worksheets, group-based interventions and pharmacotherapy. Apart from the usual methods of cessation such as tapering off and abrupt cessation ("cold turkey"), the Manual also lists new and innovative interventions such as the "Recovery Calendar". Above all, the Manual highlights the importance of recognizing the dangerous effects of tobacco use, the benefits of quitting and the need to provide effective follow-up to prevent 'lapse' and 'relapse'. It includes a series of succinct, ready-to-use methods, counselling techniques and model motivational tools that can be practiced by the health professional to promote tobacco cessation.


Summary

Helping People Quit Tobacco: A Manual for Doctors and Dentists is a comprehensive dossier on tobacco cessation with the help of intervention from doctors and dentists. The document begins with the premise that the core responsibility of any doctor or dentist includes reducing the use of tobacco among his patients and in the community, and encouraging tobacco cessation. The importance of the TEACH tool to meet the MPOWER goals of the World Health Organization are also enunciated. The Manual cites relevant statistics from the apex global tobacco surveys to highlight the extent and enormity of the tobacco epidemic in the South-East Asia Region, and also outlines the nature of harm caused by tobacco use, its inherent links with several debilitating diseases and the manifold risks of using smoking and smokeless tobacco products. The Manual encourages doctors and dentists to identify at the earliest possible stage tobacco use in a patient, and provides step-by-step guidelines on intervention and assisted cessation through counselling, motivational tools and medication or pharmacotherapy. A concluding section provides details on 'lapse' and 'relapse' and how to overcome the same.


Summary

Reducing the use of tobacco is a complex task as it involves enormous socio-cultural and health dimensions. It requires a multi-sectoral and integrated approach that includes consistent and continuous communication for behavioural and social change. Communication as such, is a strategic process to influence individual and group
behaviour that needs systematic planning and implementation. This document tends to define the framework and
the key elements of communication for tobacco control to be used in the Member States of the South-East Asia
Region. It focuses on the major approaches of communication and guiding principles for planning and using the
communication components for designing the effective communication for tobacco control programme. It
suggests a model for communication planning based on communication objectives, target groups and potential
barriers which determines the communication approach, message development and selection of media. It
emphasizes on the importance of using media mix, partnership, capacity building and regular evaluation of
communication activities.

World Health Organization, Regional Office for South-East Asia. Bloomberg Global Initiative to Reduce

Summary

Since 2007 the Bloomberg Global Initiative to Reduce Tobacco Use (BGI) is being implemented in the South-
East Asia Region. Four countries from the Region - Bangladesh, India, Indonesia and Thailand - were selected
as priority countries under the Initiative. In 2007 both human and financial support was provided to these
countries to strengthen their capacity for tobacco control. The WHO South-East Asia Region was the first and
only Region to have organized an orientation workshop for all BGI staff. The workshop was found to be useful for
the implementation of the Initiative in the Region. It has also enhanced the knowledge and team spirit of the
whole BGI team and provided a unique opportunity to discuss and share the challenges that the Initiative is
facing in terms of coordination for effective implementation. The workshop provided the platform to discuss and
decide on a common approach to take the Initiative to its logical fruition.

World Health Organization, Regional Office for South-East Asia. Profile on smoke-free environments in the

Summary

Smoking and exposure to second-hand smoke (SHS) are major contributors to the chronic disease burden in the
South-East Asia Region. Due to weak tobacco control measures, especially inadequate measures in the area of
SHS, a very large population in the Region is exposed to SHS. The regional profile on Smoke-free Environments
depicts the situation with respect to exposure to SHS in the Region. It also describes briefly the existing
measures in the Region for protecting people from SHS exposure. Making environments completely smoke-free
is the most effective way to protect the population from exposure to SHS everywhere, including public places and
workplaces. This can only be done by developing and strengthening smoke-free policies and legislation, and
enforcing the same.

World Health Organization, Regional Office for South-East Asia. Manual on Tobacco Control in Schools. New
Delhi: WHO SEARO; 2006.

Summary

This Manual is designed for teachers who work with 13-15-year-old students in Member countries of the World
Health Organization (WHO)'s South-East Asia (SEA) Region. The Manual uses skill- based health education
through curricular and co-curricular activities. Skill-based health education is designed to help students acquire
the knowledge, attitude and skills that are needed to make informed choices and decisions, understand the
consequences of tobacco use and tobacco advertising, adopt and practice healthy behaviours to avoid risks and
create conditions that are conducive to health. This approach also empowers students to contribute to the
creation of tobacco-free environment in which they learn and live. The Manual provides young people with an
opportunity to participate in an environmental approach to tobacco control. The decision that young people make
about tobacco use are heavily influenced by the physical, social, economic and legal environments in which they
live. The activities in the Manual represent a departure from the traditional approach of simply educating students
not to use tobacco, which is often considered an ineffective strategy. The progressive vision helps young people
move beyond a reliance on awareness education to embrace a comprehensive and science-based approach.
The focus in the Manual is on what young people can do to create tobacco-free norms and environments and to
thwart manipulative efforts of the tobacco industry to create tobacco addictions. The Manual includes classroom
activities which a school can adopt either in the form of a regular or optional curriculum. It uses a series of activities which can be carried out as interactive/participatory activities in classrooms (curricular), or as field activities in the community (co-curricular activities). A participatory approach gives students the opportunity to observe and actively practice skills, thus being engaged in “learning by doing.” In order to make these activities interactive, the class is split into small working groups and discussions are held in bigger groups based on inputs from the smaller groups. Schools that would use this Manual may adopt a similar pattern or can modify it according to their situations and needs. Teaching posters, handouts, worksheets, and answer sheets, are provided in this Manual to be used in any combination by the teacher or simply as a guide for teaching. Additionally, clippings from newspapers, a few sets of graph paper, pencils, a black board, and chalk may be used as supplementary materials by the teacher.


Summary

As part of the General Obligations under Article 5 of the WHO Framework Convention on Tobacco Control (FCTC), each Party shall develop, implement and periodically update and review multisectoral national tobacco control strategies, plans of action and programmes in order to fully comply with the provisions of the Convention. In order to provide some general guidelines on how to develop these strategies and plans of action, the Regional Strategy for Tobacco Control and Regional Plan of Action for Tobacco Control were developed by the Regional Office. The Regional Strategy contains the vision and strategic plan for tobacco control in the WHO South-East Asia Region for the next five years (2006-2010). The Plan of Action was based on the Regional Strategy for Tobacco Control (2006-2010). While the Convention provides guidelines to reduce the harm from tobacco, definitive actions to control tobacco have to take place at the country level. The successful implementation of the FCTC provisions depends almost entirely on the ability of the countries. Some countries in the Region have already developed their national strategies and plans of action and others are in the process of doing so. These two documents would be helpful in revising the existing national strategies and plans of action in countries that have already developed the same to make them fully compatible with the WHO FCTC. The documents would also be helpful developing national strategies and plans of action by countries which have not yet done so.


Summary

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No abstract available

Summary

The manual is intended primarily for people who work in a health facility serving a 'local' population. A doctor or nurse or someone else in the health facility can use the guidelines to create changes in the communities served by them. But people outside the medical or health professions too can use these guidelines effectively. The interventions (except sections in chapter 8 on 'cessation') can be implemented by any concerned individual, and do not require special medical expertise. The manual can be used for self-instruction or for training. The activities suggested are for implementation at the level of local communities, not at national level. So the emphasis is on action relevant to a community or a clinic.

4. Tobacco promotion: Advertising and sponsorship


Abstract

BACKGROUND: This study assessed the prevalence and influence of exposure to pro-tobacco advertisements among adolescents in 20 low and middle income countries (LMICs). (includes Sri Lanka)

METHODS: The 2007-2008 Global Youth Tobacco Survey was analyzed for students aged 13-15 years in 20 LMICs. Overall and sex-specific prevalence of exposure to tobacco advertisements in several media, as well as the prevalence of smoking susceptibility (i.e., the lack of a firm commitment among never smokers not to smoke in the future or if offered a cigarette by a friend) were assessed. The variability of the point estimates was assessed using 95% confidence intervals (CI). Logistic regression was used to assess the effect of exposure to multiple (i.e., ≥2) pro-tobacco advertisements on current smoking, adjusting for age and sex (P < 0.05). Data were weighted and analyzed with Stata version 11.

RESULTS: Overall country-specific prevalence for different advertisement sources ranged as follows: movies/videos (78.4% in Lesotho to 97.8% in Belize); television programs (48.7% in Togo to 91.7% in the Philippines); newspapers/magazines (29.5% in Togo to 89.7% in the Philippines); and outdoor community events (30.6% in Rwanda to 79.4% in the Philippines). The overall proportion of never smokers who were susceptible to cigarette smoking ranged from 3.7% in Sri Lanka to 70.1% in Kyrgyzstan. Exposure to ≥2 sources of pro-tobacco advertisements was associated with significantly increased odds of cigarette smoking among adolescents in several countries including South Africa (adjusted odds ratio, aOR = 4.11; 95% CI:2.26-7.47), Togo (aOR = 3.77; 95% CI:1.27-11.21), the Former Yugoslav Republic of Macedonia (aOR = 1.62; 95% CI:1.01-2.99), Republic of Moldova (aOR = 1.53; 95% CI:1.11-2.12), Belize (aOR = 13.95; 95% CI:1.91-102.02), Panama (aOR = 5.14; 95% CI: 2.37-11.14) and Mongolia (aOR = 1.52; 95% CI:1.19-1.94).

CONCLUSION: Prevalence of exposure to various pro-tobacco advertisements was high among adolescents in the LMICs surveyed. Enhanced and sustained national efforts are needed to reduce exposure to all forms of tobacco advertising and promotional activities.

PMID: 23701716[PubMed] PMCID: PMC3665668


No abstract available

PMID: 12773716 [PubMed - indexed for MEDLINE] PMCID: PMC1747726

5. Tobacco economics including Interference of tobacco industry

Summary

Over the past 20 years, with the liberalization of international trade, trade in tobacco and tobacco products has rapidly expanded. This has led to a corresponding rise in tobacco consumption across low- and middle-income countries since the 1980s, and poses a major threat to global public health. This phenomenon highlights the inevitable connection between international trade agreements and the tobacco control policies enshrined in the WHO Framework Convention on Tobacco Control (FCTC). An Expert Intercountry Consultation on Tobacco and Trade was held at the WHO Regional Office for South-East Asia, New Delhi on 3-4 October 2012. A total of 31 participants from the ministries of health, trade and, agriculture and legal offices from nine Member States as well as WHO staff from WHO country offices in Bangladesh, India, Indonesia, Myanmar and Nepal attended. Recommendations for the Member States were: (1) establishing and strengthening coordination between the ministries of health and trade on policies and regulations on trade and investment relating to tobacco and tobacco products; (2) promoting advocacy on health perspectives of international and investment agreements; (3) strengthening full implementation of the WHO FCTC; (4) mobilizing more funds for tobacco control in the Member States; (5) ensuring law enforcement and public compliance; and (6) conducting research on health cost studies and alternative livelihood for tobacco farmers. It was recommended that WHO should strengthen the capacities of Member States on health perspectives of international trade and investment agreements.


Summary

There is a fundamental and irreconcilable conflict between the interests of the tobacco industry and public health policy. On the one hand, the tobacco industry produces and promotes a product that has been scientifically proven to be highly addictive and harmful, and which exacerbates social ills, including poverty. On the other hand, governments and the public health sector try to improve the health of the population by implementing measures to reduce tobacco use. As the countries work towards developing and enforcing tobacco control measures, interference by the tobacco industry to counter these measures increases. The growing, manufacturing, distribution and selling components of the tobacco industry get involved in such interference through different means. Article 5.3 of the WHO Framework Convention on Tobacco Control and its Guidelines recommend how such interference should be addressed. Nineteen delegates from different sectors of 10 countries of the WHO South-East Asia Region attended a regional meeting on countering tobacco industry interference, from 19-21 March 2013, at the WHO Regional Office for South-East Asia, New Delhi, to analyse this issue and formulate strategies to address it. The recommendations for the Member States were to: (1) review and revise as needed, the terms of reference of the national tobacco control focal points; (2) formulate and implement, within one year, a communication strategy to raise awareness among various government and nongovernment stakeholders about tobacco industry interference and measures to counter it; (3) develop and implement a sustainable and systematic national and regional monitoring mechanism to ensure that information related to the tobacco industry is current and accurate; (4) review, and where not available, formulate a code of conduct for national officials that provides guidance on how to prevent conflicts of interest, real or perceived, between the civil service, elected officials and other national officials and the tobacco industry interests; and (5) review, and where not available, formulate rules for interaction between government and the tobacco industry, based on Guidelines for Article 5.3 of the WHO Framework Convention on Tobacco Control.


Summary

Health-care financing continues to be a contentious issue in most Member States of the WHO South-East Asia Region. While making an effort to address the concerns about health services delivery and accessibility, matters regarding mechanisms of financing and budgeting must also be taken into account. To this end, a collaborative and consultative Expert Group Meeting aiming at fostering ideas and exchanging thoughts was organized at WHO SEARO, New Delhi, India, on 13-14 June 2011. Following this meeting, the document titled Tobacco Taxation and Innovative Health-care Financing was developed. It highlights the empirical evidence and existing literature on tobacco taxation, the practices of earmarking taxes for specific projects or programmes in Member States, and innovative methods of financing health-care.
Summary

This paper examines the social, cultural, economic and legal dimensions of tobacco control in the South-East Asia Region in a holistic view through the review of findings from various studies on prevalence, tobacco economics, poverty alleviation, women and tobacco and tobacco control laws and regulations. Methods were literature review of peer reviewed publications, country reports, WHO publications, and reports of national and international meetings on tobacco and findings from national level surveys and studies. Tobacco use has been a social and cultural part of the people of South-East Asia Region. Survey findings show that 30% to 60% of men and 1.8% to 15.6% of women in the Region use one or the other forms of tobacco products. The complex nature of tobacco use with both smoking and smokeless forms is a major challenge for implementing tobacco control measures. Prevalence of tobacco use is high among the poor and the illiterate. It is higher among males than females but studies show a rising trend among girls and women due to intensive marketing of tobacco products by the tobacco industry. Tobacco users spend a huge percent of their income on tobacco which deprives them and their families of proper nutrition, good education and health care. Some studies of the Region show that cost of treatment of diseases attributable to tobacco use was more than double the revenue that governments received from tobacco taxation. Another challenge the Region faces is the application of uniform tax to all forms of tobacco, which will reduce not only the availability of tobacco products in the market but also control people switching over to cheaper tobacco products. Ten out of eleven countries are Parties to the WHO Framework Convention on Tobacco Control and nine countries have tobacco control legislation. Enforcement of control measures is weak, particularly in areas such as smoke-free environments, advertisement at the point of sale and sale of tobacco to minors. Socio-cultural acceptance of tobacco use is still a major challenge in tobacco control efforts for the governments and stakeholders in the South-East Asia Region. The myth that chewing tobacco is less harmful than smoking tobacco needs to be addressed with public awareness campaigns. Advocacy on the integration of tobacco control with poverty alleviation campaigns and development programs is urgently required. Law enforcement is a critical area to be strengthened and supported by WHO and the civil society organizations working in the area of tobacco control.

PMID: 22089683 [PubMed - indexed for MEDLINE]


Summary

This strategy sets out the objectives and priority activities for resource mobilization for 2010-2011 to ensure effective implementation of the Strategic Action Plan for Tobacco Control in South-East Asia Region. It provides strategic approaches and guidance on the major steps for resource mobilization highlighting the process of assessment for resource requirement and the potential for raising it; analysis of donor intelligence, building alliance and carrying out advocacy. It emphasizes on the need to diversify funding sources for sustainable financing to the programme and also on the importance of realistic programme development and management of resources.


Summary

Trade liberalization programme has become operational through the introduction of the South Asian Free Trade Area (SAFTA) among South Asian nations. The agreement includes tobacco and tobacco products under the "Sensitive List". This document lists ways in which trade in tobacco products can be managed under SAFTA in the context of the WHO Framework Convention on Tobacco Control.

No abstract available

PMID: 15175515 [PubMed - indexed for MEDLINE] PMCID: PMC1747847


No abstract available

PMID: 14660761[PubMed - indexed for MEDLINE] PMCID: PMC1747797


No abstract available

PMID: 12958376[PubMed - indexed for MEDLINE] PMCID: PMC1747756


No abstract available

PMID: 10691744 [PubMed - indexed for MEDLINE] PMCID: PMC174831
THAILAND

1. Tobacco use Surveillance (surveys and reports)


This summary presents key findings from Wave 1 (Jan-Mar 2005) and Wave 2 (Jul-Sep 2006) of the ITC Thailand Survey—a face-to-face survey of a cohort sample of 2,000 adult smokers and a self-administered survey of 1,000 youth in Thailand.

1.1. Youth in general


Abstract

The aim of this study was to determine the prevalence of tobacco use, beliefs and risk awareness and psychosocial correlates of tobacco use among university students in 24 low, middle and emerging economy countries. Using anonymous questionnaires, data were collected from 16953 undergraduate university students (mean age 20.9, SD=2.9) from 25 universities in 24 countries across Asia, (including Thailand) Africa and the Americas. Results indicate that overall 13.3% of the university students were current tobacco users, 22.4% for men and 6.6% for women, ranging from 3.8% in Singapore to 32.5% in Cameroon. The risk awareness of the smoking lung cancer link was 83.6%, while the risk awareness of the smoking heart disease link was 46.5%. Multivariate logistic regression found that older age, male gender, having a wealthy family background, living in a low income country, residing off campus on their own, poor beliefs in the importance not to smoke, awareness of the smoking heart disease link, hit by a sexual partner, depressive symptoms, and substance use (binge drinking and illicit drug use) were associated with current tobacco use.

PMID:25520065[PubMed - in process]


Abstract

BACKGROUND: Beliefs about smoking are important predictors of smoking behavior among adolescents, and adolescents who hold positive beliefs about the benefits of smoking are at an increased risk of smoking initiation. An alarming fact is the rising smoking prevalence in Asian countries, particularly the increasing trend in smoking during adolescence.

PURPOSE:

This cross-sectional study examined smoking beliefs and behavior among a nationally representative sample of youth in South Korea, Taiwan, and Thailand.

METHODS: Descriptive statistics, linear regression, and logistic regression methods were used to analyze data from 13-15-year-old adolescents who participated in the 2005 Global Youth Tobacco Survey (GYTS) in South Korea (N=4,765) and Thailand (N=15,420) and the 2007 GYTS in Taiwan (N=3,955).

RESULTS: The rate of ever smoking among youth was similar in all three countries and ranged from 26.7 to 28.0%. The prevalence of current smoking among youth in Thailand (11.4%) was nearly double the prevalence in South Korea (6.6%) and Taiwan (6.5%). Pro-tobacco advertising exposure, as well as older ages, was a positive and significant predictor of positive beliefs about smoking among youth in all three countries. Additionally, youth who reported increased positive smoking-related beliefs, greater pro-tobacco advertising exposure, and were male were more likely to be current smokers in all three countries.
CONCLUSION: Results suggest that greater attention be directed to understanding beliefs and attitudes about smoking among youth. Exploring the relationship between these factors and smoking behavior can provide a strong starting point in the development of effective smoking prevention interventions and tobacco control policies in this region.

PMID: 22592594 [PubMed - indexed for MEDLINE]


Abstract

**INTRODUCTION:** In this study, we aimed to examine, in Thailand, the impact on smokers' reported awareness of and their cognitive and behavioral reactions following the change from text-only to pictorial warnings printed on cigarette packs. We also sought to explore differences by type of cigarette smoked (roll-your-own [RYO] vs. factory-made [FM] cigarettes).

**METHODS:** Data came from the International Tobacco Control Southeast Asia Survey, conducted in Thailand and Malaysia, where a representative sample of 2,000 adult smokers from each country were recruited and followed up. We analyzed data from one wave before (Wave 1) and two waves after the implementation of the new pictorial warnings (two sets introduced at Waves 2 and 3, respectively) in Thailand, with Malaysia, having text-only warnings, serving as a control.

**RESULTS:** Following the warning label change in Thailand, smokers’ reported awareness and their cognitive and behavioral effects increased markedly, with the cognitive and behavioral effects sustained at the next follow-up. By contrast, no significant change was observed in Malaysia over the same period. Compared to smokers who smoke any FM cigarettes, smokers of only RYO cigarettes reported a lower salience but greater cognitive reactions to the new pictorial warnings.

**CONCLUSIONS:** The new Thai pictorial health warning labels have led to a greater impact than the text-only warning labels, and refreshing the pictorial images may have helped sustain effects. This finding provides strong support for introducing pictorial warning labels in low- and middle-income countries, where the benefits may be even greater, given the lower literacy rates and generally lower levels of readily available health information on the risks of smoking.

PMID: 23291637 [PubMed - indexed for MEDLINE] PMCID: PMC3715385


Abstract

**BACKGROUND:** Illicit cigarette consumption has increased worldwide. It is important to understand this problem thoroughly.

**OBJECTIVES:** To investigate behaviours and factors associated with illicit cigarette consumption in southern Thailand.

**DESIGN:** A survey and qualitative study were conducted in a border province in southern Thailand next to Malaysia. A modified snowballing technique was used to recruit 300 illicit and 150 non-illicit cigarette smokers. A questionnaire was used to interview subjects. Illicit cigarette packs were obtained in order to identify their characteristics. Bivariate and multivariate logistic regression was used for data analysis.

**RESULTS:** Smoking of illicit cigarettes has become accepted in the communities. They were available in supermarkets and vendor shops. Friends and other illicit smokers known by illicit cigarette smokers were an important source of information for access to illicit cigarette products. The main factors associated with smoking illicit cigarettes, compared with smoking non-illicit cigarettes, were younger age, higher education and higher average monthly expenditure on cigarettes (most illicit smokers smoked illicit cigarettes (average price per packet = 33 THB (US$1.1), while most non-illicit smokers smoked hand-rolled cigarettes (average price per packet = 7
An annotated bibliography of scientific studies done on tobacco topic in WHO South-East Asia Region countries

PMID: 22174006 [PubMed - indexed for MEDLINE]


Abstract

At present, 70% of the world's 1.1 billion smokers are in developing countries, with over 50% in Asia alone. The current study examined patterns of youth smoking in Thailand and Malaysia. Respondents were 2002 youths between the ages of 13 and 17 from Thailand (n = 1000) and Malaysia (n = 1002). Respondents were selected using a multistage cluster sampling design and surveyed between January 2005 and March 2005. Approximately 3% of youth between the ages of 13 and 17 were current smokers, with an additional 10% to 12% reporting experimental smoking. Males were between 7 and 15 times more likely to report smoking behavior than females. Less than 1% of female respondents in either country met the criteria for current smoking, and less than 5% met the criteria for experimental smoking. In contrast, more than 50% Thai males and approximately one-third of Malaysian males aged 17 met the criteria for either experimental or current smoking.

PMID: 19124313 [PubMed - indexed for MEDLINE]


Abstract

Using data from the Kanchanaburi demographic surveillance system in Thailand, this article documents that tobacco smoke affects 60% of the population. The main effect is through exposure to secondhand smoke. More than half of men are smokers compared with only one tenth of women. Most men tend to start smoking during their teenage years, whereas the majority of women start at later ages. The majority of households are exposed to secondhand smoke. The highest level of exposure is in rural areas. Smokers are most likely to be male and older, but those exposed to secondhand smoke tend to be female and younger. Exposure to secondhand smoke is more likely to occur in households with lower socioeconomic status. Logistic regression analysis supports 2 study hypotheses: that children and women are the most affected by secondhand smoke, and household factors are the most important factors affecting the exposure to secondhand smoke.

PMID: 19124296 [PubMed - indexed for MEDLINE]


Abstract

This paper examines the prevalence of smoking, the age pattern of initiation of smoking, and factors associated with current smoking status among 15–19 year olds in five Asian societies, using data from large-scale youth surveys. The life-table method is used to examine the age pattern of initiation of smoking and logistic regression is used to examine factors associated with current smoking status.

Smoking prevalence is high among boys but very low among girls. Among boys, 82 percent in Indonesia, 73 percent in Thailand, 70 percent in the Philippines, and 35 percent in Nepal begin smoking by age 20. In all countries, smoking is much more prevalent among teens who have experienced some transitions to adulthood. In

An annotated bibliography of scientific studies done on tobacco topic in WHO South-East Asia Region countries 435
Indonesia and Nepal, teen smoking is more prevalent in less developed regions. Among Filipino girls, residence in metro Manila is associated with high probability of smoking. In most countries, teens who have close relationships with parents are less likely to smoke.

1.1.1. Global Youth Tobacco Survey (GYTS)


Abstract

BACKGROUND: The Association of Southeast Asian Nations (ASEAN) has made tobacco use prevention a primary health issue. All ASEAN countries except Indonesia have ratified the World Health Organization Framework Convention on Tobacco Control (WHO FCTC), the world's first public health treaty on tobacco control.

METHODS: Global Youth Tobacco Survey (GYTS) data were collected from representative samples of students in school grades associated with ages 13-15 in Cambodia, Indonesia, Laos (Vientiane), Malaysia, Myanmar, Philippines, Singapore, Thailand and Vietnam (Hanoi).

RESULTS: Current cigarette smoking ranged from less than 5% (Vietnam and Cambodia) to 20.2% in Malaysia. Current use of tobacco products other than cigarettes was less than 10% in all countries. Boys were significantly more likely than girls to smoke cigarettes or use other tobacco products. Exposure to second-hand smoke in public places was greater than 50%, direct pro-tobacco advertising exposure was greater than 75% and over 10% of students were exposed to indirect advertising. Over 60% of students who currently smoked cigarettes wanted to stop, but 80% who tried to quit in the year prior to the survey failed.

CONCLUSIONS: Efforts to reduce the current and projected harm caused by tobacco use in the ASEAN countries are urgently needed. ASEAN countries need to expand their national comprehensive tobacco prevention and control programs and enforce those laws already passed. Without this effort little reduction can be expected in the burden of chronic diseases and tobacco-related mortality.

PMID: 18669557 [PubMed - indexed for MEDLINE]


Abstract

INTRODUCTION: Thailand ratified the World Health Organization (WHO) Framework Convention on Tobacco Control (FCTC) on November 8, 2004. The WHO FCTC requires all parties to inform all persons of the health consequences of tobacco consumption and exposure to tobacco smoke. Each party has agreed to develop, implement and evaluate effective tobacco control programs to measure progress in reaching the goals of the WHO FCTC. METHODS: The Global Youth Tobacco Survey (GYTS) was developed to provide data on youth tobacco use to countries for their development of youth-based tobacco control programs. Data in this report can be used as baseline measures for future evaluation of the tobacco control programs implemented by the Ministry of Public Health. RESULTS: Overall, about 1 in 10 Thai students are current smokers, this number including 4 times more boys than girls (17% versus 3.9%). Almost 2 in 10 Thai students start smoking before the age of 10, and almost 7 in 10 students are reported to have been exposed to smoke from others in public places. About 4 in 10 students are reported to have an object with a cigarette brand logo on it. CONCLUSION: The key for Thailand is to implement and enforce the provisions on indirect tobacco advertising, smoking in public places, selling
tobacco to youths under 18 years of age, and to use the data from the GYTS to monitor progress toward achieving the goals of the WHO FCTC. When these goals are met, tobacco consumption and exposure in Thailand will have declined substantially.

PMID: 19091046 [PubMed - indexed for MEDLINE] PMCID: PMC260486


Abstract

Thailand ratified the WHO Framework Convention on Tobacco Control (WHO FCTC) on November 8, 2004. The WHO FCTC requires all Parties to inform all persons of the health consequences of tobacco consumption and exposure to tobacco smoke. Each Party has agreed to develop, implement and evaluate effective tobacco control programs to measure progress in reaching the goals of the WHO FCTC. The Global Youth Tobacco Survey (GYTS) was developed to provide data on youth tobacco use to countries for their development of youth based tobacco control programs. Through the cooperation of the Army Reserve Affairs, information on tobacco control issues/topics, including strategies of tobacco industry to tempt young people to smoke, were published as a chapter in the new edition of Army Reserve Training Manual, which is distributed to all first year Army reserve students. Follow up on the youths and the Army Reserve Teaching staffs regarding knowledge, attitude, and tobacco control laws will be conducted next year. Data in this report can be used as baseline measures for future evaluation of the tobacco control programs implemented by the Ministry of Health. The key for Thailand is to implement and enforce the provisions of indirect tobacco advertising, no smoking in public places, selling tobacco to youth under age 18, and use the data from GYTS to monitor progress toward achieving the goals of the WHO FCTC. When these goals are met, tobacco consumption and exposure in Thailand will have declined substantially.

1.1.2. Global Adult Tobacco Survey (GATS)


Abstract

BACKGROUND: Current smoking prevalence in Thailand decreased from 1991 to 2004 and since that time the prevalence has remained flat. It has been suggested that one of the reasons that the prevalence of current smoking in Thailand has stopped decreasing is due to the use of RYO cigarettes. The aim of this study was to examine characteristics of users of manufactured and RYO cigarettes and dual users in Thailand, in order to determine whether there are differences in the characteristics of users of the different products.

METHODS:

The 2009 Global Adult Tobacco Survey (GATS Thailand) provides detailed information on current smoking patterns. GATS Thailand used a nationally and regionally representative probability sample of 20,566 adults (ages 15 years and above) who were chosen through stratified three-stage cluster sampling and then interviewed face-to-face.

RESULTS: The prevalence of current smoking among Thai adults was 45.6% for men and 3.1% for women. In all, 18.4% of men and 1.0% of women were current users of manufactured cigarettes only, while 15.8% of men and 1.7% of women were current users of RYO cigarettes only. 11.2% of men and 0.1% of women used both RYO and manufactured cigarettes. Users of manufactured cigarettes were younger and users of RYO were older. RYO smokers were more likely to live in rural areas. Smokers of manufactured cigarettes appeared to be more knowledgeable about the health risks of tobacco use. However, the difference was confounded with age and education; when demographic variables were controlled, the knowledge differences no longer remained. Smokers of manufactured cigarettes were more likely than dual users and those who used only RYO to report that they were planning on quitting in the next month. Users of RYO only appeared to be more addicted than the other two groups as measured by time to first cigarette.

CONCLUSIONS: There appears to be a need for product targeted cessation and prevention efforts that are directed toward specific population subgroups in Thailand and include information on manufactured and RYO cigarettes.

PMID: 23530750 [PubMed - indexed for MEDLINE] PMCID: PMC3621680
Thailand


Abstract

BACKGROUND: Hardcore smoking is represented by a subset of daily smokers with high nicotine dependence, inability to quit and unwillingness to quit. Estimating the related burden could help us in identifying a high risk population prone to tobacco induced diseases and improve cessation planning for them. This study assessed the prevalence and associated factors of hardcore smoking in three South-East Asian countries and discussed its implication for smoking cessation intervention in this region.

MATERIALS AND METHODS: Global Adult Tobacco Survey (GATS) data of India, Bangladesh and Thailand were analyzed to quantify the hardcore smoking prevalence in the region. On the basis of review, an operational definition of hardcore smoking was adopted that includes (1) current daily smoker, (2) no quit attempt in the past 12 months of survey or last quit attempt of less than 24 hours duration, (3) no intention to quit in next 12 months or not interested in quitting, (4) time to first smoke within 30 minutes of waking up, and (5) knowledge of smoking hazards. Logistic regression analysis was carried out using hardcore smoking status as response variable and gender, type of residence, occupation, education, wealth index and age-group as possible predictors.

RESULTS: There were 31.3 million hardcore smokers in the three Asian countries. The adult prevalence of hardcore smoking in these countries ranges between 3.1% in India to 6% in Thailand. These hardcore smokers constitute 18.3-29.7% of daily smokers. The logistic regression model indicated that age, gender, occupation and wealth index are the major predictors of hardcore smoking with varied influence across countries.

CONCLUSIONS: Presence of a higher number of hardcore smoking populations in Asia is a major public health challenge for tobacco control and cancer prevention. There is need of intensive cessation interventions with due consideration of contextual predictors.

PMID: 23621209 [PubMed - indexed for MEDLINE]


Abstract

BACKGROUND: Tobacco use has been identified as the single biggest cause of inequality in morbidity. The objective of this study is to examine the role of social determinants on current tobacco use in thirteen low-and-middle income countries.

METHODOLOGY/PRINCIPAL FINDINGS: We used nationally representative data from the Global Adult Tobacco Survey (GATS) conducted during 2008-2010 in 13 low-and-middle income countries: Bangladesh, China, Egypt, India, Mexico, Philippines, Poland, Russian Federation, Thailand, Turkey, Ukraine, Uruguay, and Viet Nam. These surveys provided information on 209,027 respondent's aged 15 years and above and the country datasets were analyzed individually for estimating current tobacco use across various socio-demographic factors (gender, age, place of residence, education, wealth index, and knowledge on harmful effects of smoking). Multiple logistic regression analysis was used to predict the impact of these determinants on current tobacco use status. Current tobacco use was defined as current smoking or use of smokeless tobacco, either daily or occasionally. Former smokers were excluded from the analysis. Adjusted odds ratios for current tobacco use after controlling other cofactors, was significantly higher for males across all countries and for urban areas in eight of the 13 countries. For educational level, the trend was significant in Bangladesh, Egypt, India, Philippines and Thailand demonstrating decreasing prevalence of tobacco use with increasing levels of education. For wealth index, the trend of decreasing prevalence of tobacco use with increasing wealth was significant for Bangladesh, India, Philippines, Thailand, Turkey, Ukraine, Uruguay and Viet Nam. The trend of decreasing prevalence with increasing levels of knowledge on harmful effects of smoking was significant in China, India, Philippines, Poland, Russian Federation, Thailand, Ukraine and Viet Nam.

CONCLUSIONS/SIGNIFICANCE: These findings demonstrate a significant but varied role of social determinants on current tobacco use within and across countries.

PMID: 22438937 [PubMed - indexed for MEDLINE] PMCID: PMC3306395

Executive Summary

Thailand implemented the Global Adult Tobacco Survey (GATS) in 2009 and 2011, using a standard global protocol. Findings from GATS assist countries in the formulation, tracking and implementation of effective tobacco control interventions. The findings allow for strong exchange of information following the World Health Organization Framework Convention on Tobacco Control (WHO FCTC) Article 20 – research and surveillance and exchange of information, and Article 21 – reporting and exchange of information. Thailand ratified the WHO FCTC on 8 November 2004. The GATS findings also inform the implementation of the WHO MPOWER, a package of six evidence-based demand reduction measures contained in the WHO. These include: monitor tobacco use and prevention policies, protect people from tobacco smoke, offer help to quit tobacco use, warn about the dangers of tobacco, enforce bans on tobacco advertising, promotion and sponsorship, and raise taxes on tobacco. GATS is a nationally representative household survey of all non-institutionalized adults (defined in this survey as people aged 15 years and above). The survey used a three-stage stratified cluster sampling and was designed to produce key indicators for the whole country stratified by gender, urban and rural residence, and for each of the five regions of the country – Bangkok metropolis, Central, Northern, Northeastern and Southern – stratified by gender. Data were collected from one selected person in each participating household using an adapted questionnaire administered using an electronic data collection device. Primary sampling units (PSUs) in the repeat 2011 GATS were from the same enumeration areas as in the 2009 GATS. In the 2011 GATS, new households were selected from previously sampled PSUs. The 2011 GATS provides information on tobacco use, cessation, second-hand smoke (SHS), economics of manufactured cigarettes and shredded tobacco products, media, knowledge, attitudes and perceptions, and pictorial health warnings. In the 2011 GATS, 21 488 households were screened and 20 606 adults aged 15 years and above were interviewed; the overall response rate was 96.3%. Field implementation took three months, from 1 October to 30 December 2011. The average time for each interview was 21.9 minutes per respondent. Implementing organizations conducting the 2011 GATS were the Bureau of Tobacco Control (BTC), Department of Disease Control, Ministry of Public Health, National Statistical Office (NSO), and Faculty of Public Health, Mahidol University (PH-MU). Technical assistance was provided by WHO and the United States Centers for Disease Control and Prevention (CDC). This report provides key findings from the 2011 GATS and also provides a comparative summary between the two survey rounds (2009 and 2011 GATS).


1.2. Children (including school going children)


Abstract

OBJECTIVE: To study the prevalence of substance use and associated factors in school students in Tsunami affected areas in southern Thailand.

MATERIAL AND METHOD: The study was a school-based, cross-sectional, anonymous survey that used a translated questionnaire, ESPAD-03, in 5 schools. Chi-square tests and odds ratios were used to evaluate factors associated with substance use.

RESULTS: Two thousand seven hundred and sixteen students (87.8%) were enrolled in the study. Lifetime, last 12 months, and last 30 days prevalence rates of any substance use were 50.3, 33.9, and 24.8%, respectively. Lifetime, last 12 months, and last 30 days prevalence rates of alcohol use were 43.2, 30.1, and 17.5%, respectively. Lifetime and last 30 days prevalence rates of smoking were 21.7 and 12.0%. Fighting, stealing, truancy, running away, unsafe sex, and thought of self-harming were associated with alcohol and substance use. Siblings and friends with alcohol and substance use were risk factors. Close support from parents and friends were protective factors.

CONCLUSION: There was a high prevalence of smoking, alcohol, and substance use among school students in Tsunami affected areas. Behavioral problems and psychosocial risk factors were associated with history of smoking, alcohol and substance use. School-based intervention in students with behavioral problems seems to
be a worthwhile investment. However, longitudinal studies should be done to confirm the correlation of PTSD and substance use.

PMID:25391174[PubMed - in process]


Abstract

OBJECTIVE: Evaluate the implementation of a smoking prevention program via a questionnaire. Both knowledge and attitudes toward smoking behavior and smoking cessation were also investigated MATERIAL AND METHOD: An experimental study was conducted between October 2011 and July 2012. Two hundred twenty six school students from Mathayom 1 to 6 participated into the present study. They were divided into either a study group (n = 99) or a control group (n = 127). Participants in the study group underwent two days of a smoking prevention program and the control group was not subjected to this program. Both groups completed a questionnaire containing questions related to the knowledge of the dangers of cigarette, attitudes toward smoking behavior, and smoking cessation at three different stages, pre-program, immediate post-program, and one month post-program. All data was analyzed via statistical methods. RESULTS: Participants in the study group were smokers and non-smokers, aged between 13 and 15, studied in Mathayom 1 to 6. It was reported that 75% of smokers had tried to quit smoking at least once. For those who quit smoking successfully, 83.6% sought advice from their families. Regarding knowledge related to the dangers of cigarettes, the study group had significantly higher scores than the control group at the three different stages (pre-program, immediate post-program, and one month post-program p = 0.001, 0.001, and 0.024 respectively). The attitudes toward smoking cessation behavior between the groups were significantly different at the three different stages (p = 0.03, 0.01, and 0.001 respectively). The influential factor significantly related to decision-making related to quitting cigarettes was advice, especially from friends and families (p < 0.05). CONCLUSION: School students aged between 13 to 15 years of age studying in Mathayom 3 (grade 9) represented the majority of smokers. The study found the smoking cessation prevention program was able to improve knowledge of the dangers of cigarettes. After the completion of the program, the effect of actors on their lives such as medical conditions, social norms, and friends and families made smokers realize the importance of quitting smoking.

PMID: 23951832 [PubMed - indexed for MEDLINE]


Abstract

BACKGROUND: Pneumococcal disease is a major cause of childhood death. Almost a third of the world's children live in Southeast Asia, but there are few data from the region on pneumococcal colonization or disease. Our aim was to document the dynamics of pneumococcal carriage in a rural SE Asian birth cohort.

METHODS: We studied 234 Karen mother-infant pairs in Northwestern Thailand. Infants were followed from birth and nasopharyngeal swabs were taken from mother and infant at monthly intervals until 24 months old.

RESULTS: 8,386 swabs were cultured and 4,396 pneumococci characterized. Infants became colonized early (median 45.5 days; 95% confidence interval [CI] 44.5-46.0) and by 24 months had a median of seven (range 0-15) carriage episodes. Maternal smoking and young children in the house were associated with earlier colonization (hazard ratio [HR] 1.5 (95% CI 1.1-2.1) and 1.4 (95% CI 1.0-1.9)). For the four commonest serotypes and non-typeable pneumococci, previous exposure to homologous or heterologous serotypes resulted in an extended interval to reacquisition of the same serotype. Previous colonization by serotypes 14 and 19F was also associated with reduced carriage duration if subsequently reacquired (HR [first reacquisition] 4.1 (95% CI 1.4-12.6) and 2.6 (1.5-4.7)). Mothers acquired pneumococci less frequently, and carried them for shorter periods, than infants (acquisition rate 0.5 vs. 1.1 /100 person-days, p<0.001; median duration 31.0 vs. 60.5 days, p<0.001). 55.8% of pneumococci from infants were vaccine serotypes (13-valent pneumococcal conjugate vaccine, PCV13), compared with 27.5% from mothers (p<0.001). Non-typeable pneumococcal carriage was common, being carried at least once by 55.1% of infants and 32.0% of mothers.
CONCLUSIONS: Pneumococcal carriage frequency and duration are influenced by previous exposure to both homologous and heterologous serotypes. These data will inform vaccination strategies in this population.

PMID: 22693610 [PubMed - indexed for MEDLINE] PMCID: PMC3365031


Abstract

This article examines the prevalence of current smoking and associated psychosocial correlates and whether these correlates differ by sex among adolescent students in Thailand. Data were analyzed from the Thailand Global Youth Tobacco Survey (GYTS), a school-based, cross-sectional survey conducted in 2005 and completed by Mathayom 1, 2, and 3 (U.S. seventh through ninth grades) students. Weighted prevalence estimates of the percentage of students who were current smokers (smoked on ≥ 1 day during the past 30 days) and noncurrent smokers were calculated for the sample and for each psychosocial variable. Separate logistic regression models were calculated for males and females to examine the independent association of the psychosocial correlates of current smoking. Significant correlates for both males and females included close peer smoking, secondhand smoke exposure, being offered a free cigarette by a tobacco industry representative, and belief that smoking is not harmful. These correlates are examined in the context of comprehensive tobacco control laws in Thailand.

PMID: 20980536 [PubMed - indexed for MEDLINE]

1.3. Health professionals (including medical and dental students)


Abstract

INTRODUCTION: Finding ways to discourage adolescents from taking up smoking is important because those who begin smoking at an earlier age are more likely to become addicted and have greater difficulty in quitting. This article examined whether antismoking messages and education could help to reduce smoking susceptibility among adolescents in two Southeast Asian countries and to explore the possible moderating effect of country and gender.

METHODS: Data came from Wave 1 of the International Tobacco Control Southeast Asia Project (ITC-SEA) survey conducted in Malaysia (n = 1,008) and Thailand (n = 1,000) where adolescents were asked about receiving antismoking advice from nurses or doctors, being taught at schools about the danger of smoking, noticing antismoking messages, knowledge of health effects of smoking, beliefs about the health risks of smoking, smoking susceptibility, and demographic information. Data were analyzed using chi-square tests and logistic regression models.

RESULTS: Overall, significantly more Thai adolescents reported receiving advice from their nurses or doctors about the danger of smoking (p < .001), but no country difference was observed for reported antismoking education in schools and exposure to antismoking messages. Multivariate analyses revealed that only provision of antismoking education at schools was significantly associated with reduced susceptibility to smoking among female Malaysian adolescents (OR = 0.26). Higher knowledge of smoking harm and higher perceived health risk of smoking were associated with reduced smoking susceptibility among Thai female (OR = 0.52) and Malaysian male adolescents (OR = 0.63), respectively.

CONCLUSIONS: Educating adolescents about the dangers of smoking in schools appears to be the most effective means of reducing adolescents' smoking susceptibility in both countries, although different prevention strategies may be necessary to ensure effectiveness for male and female adolescents.

PMID: 22949569 [PubMed - indexed for MEDLINE] PMCID: PMC3545717
**Abstract**

**BACKGROUND:** The Medical and Dental Global Health Professions Student Surveys (GHPSS) are surveys based in schools that collect self-administered data from students on the prevalence of tobacco use, exposure to second-hand smoke, and tobacco cessation training, among the third-year medical and dental students. 

**MATERIALS AND METHODS:** Two rounds of medical and dental GHPSS have been conducted in Bangladesh, India, Myanmar, Nepal, Sri Lanka, and Thailand, among the third-year medical and dental students, between 2005 and 2006 and 2009 and 2011. RESULTS: The prevalence of any tobacco use among third-year male and female medical students did not change in Bangladesh, India, and Nepal between 2005 and 2006 and 2009 and 2011; however, it reduced significantly among females in Myanmar (3.3% in 2006 to 1.8% in 2009) and in Sri Lanka (2.5% in 2006 to 0.6% in 2011). The prevalence of any tobacco use among third-year male dental students did not change in Bangladesh, India, Nepal, and Thailand between 2005 and 2006 and 2009 and 2011; however, in Myanmar, the prevalence increased significantly (35.6% in 2006 to 49.5% in 2009). Among the third-year female students, a significant increase in prevalence was noticed in Bangladesh (4.0% in 2005 to 22.2% in 2009) and Thailand (0.7% in 2006 to 2.1% in 2011). It remained unchanged in the other three countries. Prevalence of exposure to second-hand smoke (SHS) both at home and in public places, among medical students, decreased significantly in Myanmar and Sri Lanka between 2006 and 2009 and in 2011. Among dental students, the prevalence of SHS exposure at home reduced significantly in Bangladesh, India, and Myanmar, and in public places in India. However, there was an increase of SHS exposure among dental students in Nepal, both at home and in public places, between 2005 and 2011. Medical students in Myanmar, Nepal, and Sri Lanka reported a declining trend in schools, with a smoking ban policy in place, between 2005 and 2006 and 2009 and 2011, while proportions of dental students reported that schools with a smoking ban policy have increased significantly in Bangladesh and Myanmar. Ever receiving cessation training increased significantly among medical students in Sri Lanka only, whereas, among dental students, it increased in India, Nepal, and Thailand.

**CONCLUSION:** Trends of tobacco use and exposure to SHS among medical and dental students in most countries of the South-East Asia Region had changed only relatively between the two rounds of GHPSS (2005-2006 and 2009-2011). No significant improvement was observed in the trend in schools with a policy banning smoking in school buildings and clinics. Almost all countries in the SEA Region that participated in GHPSS showed no significant change in ever having received formal training on tobacco cessation among medical and dental students.

PMID: 23442402 [PubMed - indexed for MEDLINE]

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**Abstract**

Tobacco use is widely entrenched in the South-East Asia (SEA) Region leading to high morbidity and mortality in this region. Several studies revealed that tobacco use is widespread among youth and school children. Exposure to second-hand smoke was reported as around 50% or more in three countries - Myanmar (59.5%), Bangladesh (51.3%), and Indonesia (49.6%). Health profession students encompassing medical, dental, nursing and pharmacy disciplines, and even qualified health professionals are no exception from tobacco use. While they are regarded as role models in tobacco cessation programs, their tobacco addiction will carry a negative impact in this endeavour. A mere inquiry about the smoking status of patients and a brief advice by doctors or dentists increases quit rates and prompts those who have not thought about quitting to consider doing so. Evidence from some randomized trials suggests that advice from motivated physicians to their smoking patients could be effective in facilitating cessation of smoking. However, the low detection rate of smokers by many physicians and the small proportion of smokers who routinely receive advice from their physicians to quit have been identified as a matter of concern. This paper describes the role and issues of involvement of health professionals in tobacco control. Data from a variety of sources is used to assess the status. Although there are some differences, tobacco use is widespread among the students and health professional students. Exposure to second hand smoke is also a matter of concern. Tobacco-related problems and tobacco control cut across a vast range of health disciplines. Building alliances among the health professional associations in a vertical way will help synergize efforts, and obtain better outcomes from use of existing resources. Health professional associations in some countries in the SEA region have already taken the initiative to form coalitions at the national level to
advance the tobacco control agenda. In Thailand, a Thai Health Professional Alliance against Tobacco, with 17 allies from medical, nursing, traditional medicine, and other health professional organizations, is working in a concerted manner toward promoting tobacco control. Indian Dental Association intervention is another good example.

PMID: 23442394 [PubMed - indexed for MEDLINE]


Abstract

This study was undertaken to evaluate knowledge about HPV infection and cervical cancer among nurses in Chiang Mai University Hospital, Thailand. The 16 questions evaluating knowledge were 'true/false/do not know' type. Two hundred and twenty nurses agreed to participate in this survey. Most knew that cervical cancer is the most common female cancer in Thailand (92.7%), HPV infection is a causal factor of cervical cancer (81.8%), early stage cervical cancer is curable (94.1%), and an adequate scale of cervical screening could prevent morbidity and mortality from cervical cancer (86.8%). The majority of participants (more than 70%) correctly acknowledged risk factors for cervical cancer as smoking, having multiple sexual partners, and sex at an early age. However, the majority of participants did not know that HPV infection and early stage cervical cancer are commonly asymptomatic. In conclusion, knowledge regarding cervical cancer among nursing staff in the author's institute is considerably favorable. However, their understanding about the natural history of HPV infection and cervical cancer is suboptimal, and requires further attention if an effective cervical cancer screening program is to be implemented.

PMID:21627391[PubMed - indexed for MEDLINE]


Abstract

OBJECTIVE: Evaluate relationship between motivation and success rate to quit smoking in 59 health care workers.

MATERIAL AND METHOD: Prospective study of 59 chest disease institute health care workers were assessed for motivation and enrolled into a program to quit smoking. Comprehensive counseling in combinations with a 3-months intake of drug varenicline was used to help quit smoking. One-year follow-up was performed.

RESULTS: Fifty-two percent of volunteers had a quit ladder questionnaire result of more than or equal to 8 (set quit date). There was significant correlation between willing patients who are motivated (quit ladder questionnaire more than or equal to 8) and success rate of smoking cessation in two weeks after treatment (p = 0.010, RR 2.323, 95% confidence interval 1.144-4.714). Success rate of smoking cessation after start of treatment was as high as 47.5% and sustained to 40.7% in one year.

CONCLUSION: There was correlation between willingness and success in quitting. Varenicline help patients quit smoking.

PMID: 2142573 [PubMed - indexed for MEDLINE]


Abstract

Over the past few years, several training programs have been run in support of smoking cessation services within community pharmacy circles in Thailand. These have included a comprehensive training program offered by the
Thai Pharmacy Network for Tobacco Control (TPNTC) and brief training programs run by other agencies. This study provides an estimate of the scale of smoking cessation activities among Thai pharmacies, and examines the impact of both the brief and comprehensive training programs on the provision of smoking cessation services. A self-administered questionnaire was mailed to 3,600 Thai community pharmacists. A total of 1,001 questionnaires were returned (response rate: 27.8%). Smoking cessation services were provided by 71.1% of the respondents, and 47.4% of such services gave only brief advice. Comprehensive services (defined by the 5A's: ask, advise, assess, assist, and arrange follow-up) accounted for 15.3% of the respondents. Only 293 pharmacists (29.6%) said they had received cessation training; 62.5% of whom had received such training from TPNTC. The receipt of brief and comprehensive training was associated with a higher rate of the provision of brief advice, when compared with no training, showing adjusted odds ratios (ORs) of 2.93 (95% CI, 1.66-5.18) and 5.93 (95% CI, 3.16-10.17) respectively, while evidence of differences between these training programs was not observed, having an adjusted OR of 1.94 (95% CI, .89-4.21). TPNTC trained pharmacists were 4.98 times (95% CI, 2.24-11.05) more likely than those who received other brief training to provide the 5A's cessation services. All types of training program help to promote the provision of brief counseling by pharmacists. Comprehensive training is associated with the increased provision of both 4A's and 5A's cessation services.

PMID: 20195894 [PubMed - indexed for MEDLINE]


Abstract

OBJECTIVE: Develop a computer interactive multimedia program for health providers in smoking cessation counseling (CIMPSCC), and evaluate users' attitudes to the program.

MATERIAL AND METHOD: The CIMPSCC program was developed via Flash Professional version 9.1 and included the concept of 5As with interactive multimedia video containing conversations between a pharmacist and a smoker. A self-assessment questionnaire was also provided for the users. The program's effectiveness was assessed by comparing three groups of final year pharmacy students known as CIMPSCC, Lecture, and Control. Basic knowledge, case scenario, and total scores were statistically evaluated and attitudes towards the program were assessed.

RESULTS:

The CIMPSCC program was developed and its validity checked by a panel of specialists. Results showed there were statistically significant differences in basic knowledge, case scenario, and test scores within CIMPSCC and Lecture (p = 0.001). Post-test scores of basic knowledge and total scores were not significantly different, but case management skills between CIMPSCC and Lecture were significantly different (p = 0.069, 0.129, and 0.001 respectively). This indicated that the CIMPSCC program positively improved knowledge and case management skills regarding smoking cessation counseling. Overall attitudes to the CIMPSCC program were favorable.

CONCLUSION: The CIMPSCC program showed positive results of basic knowledge and case management skills regarding smoking cessation counseling for pharmacy students and can be used as a valuable resource in the teaching and learning process.

PMID: 19938745 [PubMed - indexed for MEDLINE]


Abstract

Community pharmacists' involvement in tobacco control and their perceived role and barriers were assessed. In part I, a self-administered questionnaire was mailed to 164 community pharmacists who applied for community pharmacy accreditation from the Thai Pharmacy Council in 2003. In part II, an in-depth interview was conducted among 13 community pharmacists who participated in the 1-day smoking cessation services training. Main outcome measures were tobacco control-related activities, perceived tobacco control role, and perceived barriers. The questionnaire response rate was 51% (83/164 pharmacists), with half of the respondents (42/83,
51%) reporting active tobacco control activities. Of these pharmacists, seven (7/42, 17%) reported participating in public or policy advocacy by campaigning against smoking in the community. Thirty-four (34/42, 81%) and thirty-six (36/42, 86%) reported engaging in activities in their own pharmacies by providing educational materials and smoking cessation services, respectively. Even though the perceived roles in tobacco control of these pharmacists were high, they also reported several barriers, especially in five categories: lack of client demand, lack of educational materials, lack of smoking cessation products, lack of knowledge and skill, and lack of follow-up visits. On the other hand, lack of time and lack of reimbursement were not indicated as important barriers. Data from in-depth interviews confirmed these findings. This study revealed that Thai community pharmacists were engaged in various levels of tobacco control-related activities. Most of them perceived the significance of tobacco control activities. However, several barriers were also reported and need to be addressed further.

PMID: 18569768 [PubMed - indexed for MEDLINE]

1.3.1. Global Health Professions Student Survey (GHPSS)


Abstract

The Nursing Global Health Professions Student Survey (GHPSS) has been conducted in schools in 39 countries and the Gaza Strip/West Bank (identified as "sites" for the remainder of this paper). In half the sites, over 20% of the students currently smoked cigarettes, with males having higher rates than females in 22 sites. Over 60% of students reported having been exposed to secondhand smoke in public places in 23 of 39 sites. The majority of students recognized that they are role models in society, believed they should receive training on counseling patients to quit using tobacco, but few reported receiving any formal training. Tobacco control efforts must discourage tobacco use among health professionals, promote smoke free workplaces, and implement programs that train health professionals in effective cessation-counseling techniques.

PMID: 20054453 [PubMed - indexed for MEDLINE] PMCID: PMC2790091

1.4. Educational personnel and other professional groups

1.4.1. Global School Personnel Survey (GSPS)


1.5. Rural communities


Abstract

BACKGROUND: Treatment for tobacco dependence is not available in many low-resource settings, especially in developing countries.

PURPOSE: To test the impact of a novel mix of monetary and social incentives on smoking abstinence in rural communities of Thailand.

DESIGN: An RCT of commitment contracts and team incentives for rural smokers to quit smoking. Smokers were not blinded to treatment status, although the assessor of the biochemical urine test was.

SETTING/PARTICIPANTS: All adult smokers living in the study area were eligible to participate; 215 adult smokers from 42 villages in Nakhon Nayok province, Thailand, participated. Fourteen smokers who lacked teammates were dropped.
INTERVENTION: A total of 201 smokers were assigned to a two-person team, and then randomly assigned by team (in a 2:1 ratio) with computer-generated random numbers to receive smoking-cessation counseling (control group) or counseling plus offer of a commitment contract, team incentives, and text message reminders for smoking cessation at 3 months (intervention group).

MAIN OUTCOME MEASURES: The primary outcome was biochemically verified 7-day abstinence at 6 months, assessed on an intention-to-treat basis. Secondary outcomes include study participation, biochemically verified abstinence at 3 months, self-reported abstinence at 14 months, and the incremental cost per quitter of the intervention, nicotine gum, and varenicline in Thailand. Data were collected in 2010-2011 and analyzed in 2012.

RESULTS: The trial enrolled 215 (10.5%) of 2055 smokers. The abstinence rate was 46.2% (61/132) in the intervention group and 14.5% (10/69) in the control group (adjusted OR 7.5 [3.0-18.6]) at 3 months; 44.3% (58/131) and 18.8% (13/69) at the primary end point of 6 months (adjusted OR 4.2 [1.8-9.7]); and 42.0% (55/131) and 24.6% (17/69) at 14 months (adjusted OR 2.2 [1.0-4.8]). The purchasing power parity-adjusted incremental cost per quitter from the intervention is $281 (95% CI=$187, $562), less than for nicotine gum ($1780, 95% CI=$1414, $2401) or varenicline ($2073, 95% CI=$1357, $4386) in Thailand.

CONCLUSIONS: The intervention enhanced abstinence by 91%-136% at 6 months, relative to the control group, although self-reports at 14 months suggest tapering of the treatment effect. The intervention may offer a viable, cost-effective alternative to current smoking-cessation approaches in low-resource settings.

TRIAL REGISTRATION: This study is registered at ClinicalTrials.gov NCT01311115.

PMID: 24139765 [PubMed - indexed for MEDLINE] PMCID: PMC3806235


Abstract

Roll-your-own (RYO) cigarette use has been subject to relatively limited research, particularly in developing countries. This paper seeks to describe RYO use in Thailand and Malaysia and relate RYO use to smokers' knowledge of the harmfulness of tobacco. Data come from face-to-face surveys with 4,004 adult smokers from Malaysia (N = 2,004) and Thailand (N = 2000), collected between January and March 2005. The prevalence of any use of RYO cigarettes varied greatly between Malaysia (17%) and Thailand (58%). In both countries, any RYO use was associated with living in rural areas, older average age, lower level of education, male gender, not being in paid work, slightly lower consumption of cigarettes, higher social acceptability of smoking, and positive attitudes toward tobacco regulation. Among RYO users, exclusive use of RYO cigarettes (compared with mixed use) was associated with older age, female gender (relatively), thinking about the enjoyment of smoking, and not making a special effort to buy cheaper cigarettes if the price goes up. Finally, exclusive RYO smokers were less aware of health warnings (RYO tobacco carries no health warnings), but even so, knowledge of the health effects of tobacco was equivalent.

PMID: 18569766 [PubMed - indexed for MEDLINE]


Abstract

OBJECTIVES: The Lampang Province is situated in the northern region of Thailand. Incidence rates of lung cancer are high for Asian standards, particularly in women. This study was conducted to quantify the risk of lung cancer associated with exposures prevalent in the area and to investigate possible interactions with genetic susceptibility. The presence of several large open-cast coal mines from 1955 close to electricity-generating plants was a particular focus of concern.

METHODS: Two-hundred and eleven cases of primary lung cancers diagnosed in 1993 to 1995 and residents in the province were recruited at the Lampang Provincial Hospital (main referral center for treatment of the disease). Two sets of controls, frequency-matched to the cases by sex and age, were recruited (a) from the resident population (202 interviewed) and (b) from patients admitted to the hospital for diseases predominantly unrelated to tobacco smoking (211 interviewed). Sociodemographic information, complete residential history, and
characteristics of the household (place of cooking, cooking fuel, and heating fuels), occupational history, and history of tobacco smoking were obtained by interview. Cases and controls (approximately 50% of the population-based series) provided a blood sample. A point source air pollution exposure index was calculated for each village/township reported in residential histories based on the linear distance from the Mae Moh Center (the area of the electricity-generating plants), the year-specific gaseous (SO$_2$ and NO$_2$) or total suspended particulate emissions from the Mae Moh Power Plant, and the percentage of wind from the center. Odds ratios (OR) for the disease associated with categorical variables were estimated within unconditional logistic regression. Extraction of genomic DNA and genotyping of variants in CYP1A1 and GSTM1 were conducted to assess the extent of modification of risk by these genes that are involved in the metabolism of polycyclic aromatic hydrocarbons, a common component of the exposures.

RESULTS: Overall, there was no evidence of relevant differences in the socioeconomic level of the three groups. The two control sets were similar with respect to lifelong tobacco habit and were subsequently pooled in analyses. Never-smokers were 7% of men and 33% of women. Smoking of local traditional products unfiltered and high in tar content is a common habit in the rural female population. ORs associated with smoking increased with duration of the habit and average daily amount, being 4.9 [95% confidence interval (95% CI), 2.5-9.7] for smokers of > or =7 cigarettes/d and 3.3 (95% CI, 1.7-6.2) for duration of 41 years or longer compared with nonsmokers. Smoking of local products was associated with an independent OR of 3.1 (95% CI, 1.7-5.6) adjusted for lifelong cumulative amount of tobacco smoked. Although most smokers had the habit for at least 16 years, the daily consumption was low compared with Western standards. Other potential sources of exposure to lung carcinogens (emission from the power-generating plants and domestic burning of coal and wood for cooking and heating) were not associated with increased risk of lung cancer. None of the three polymorphisms examined increased the risk of lung cancer or modified the risk associated with tobacco smoking.

CONCLUSION: In this rural population, 96% of male and 64% of female lung cancer incidence were explained by tobacco smoking. None of the potential sources of air pollution deriving from the combustion of coal and wood, or polymorphisms in the CYP1A1 gene or deletion of the GSTM1 had an effect on the risk of lung cancer, either together or separately.

PMID: 16614107 [PubMed - indexed for MEDLINE]

1.6. Women


Abstract

Tobacco use and secondhand smoke (SHS) exposure in reproductive-aged women can cause adverse reproductive health outcomes, such as pregnancy complications, fetal growth restriction, preterm delivery, stillbirths, and infant death. Data on tobacco use and SHS exposure among reproductive-aged women in low- and middle-income countries are scarce. To examine current tobacco use and SHS exposure in women aged 15-49 years, data were analyzed from the 2008-2010 Global Adult Tobacco Survey (GATS) from 14 low- and middle-income countries: Bangladesh, Brazil, China, Egypt, India, Mexico, Philippines, Poland, Russia, Thailand, Turkey, Ukraine, Uruguay, and Vietnam. The results of this analysis indicated that, among reproductive-aged women, current tobacco smoking ranged from 0.4% in Egypt to 30.8% in Russia, current smokeless tobacco use was <1% in most countries, but common in Bangladesh (20.1%) and India (14.9%), and SHS exposure at home was common in all countries, ranging from 17.8% in Mexico to 72.3% in Vietnam. High tobacco smoking prevalence in some countries suggests that strategies promoting cessation should be a priority, whereas low prevalence in other countries suggests that strategies should focus on preventing smoking initiation. Promoting cessation and preventing initiation among both men and women would help to reduce the exposure of reproductive-aged women to SHS.

PMID: 23114255 [PubMed - indexed for MEDLINE]

Kin F. Smoking among girls and young women in Asian Countries: A Regional Summary. South East Asian Tobacco Control Alliance(SEATCA). 2009

Abstract not available

Abstract not available


Abstract not available

1.7. Elderly


Abstract

**Aim:** This study aimed to investigate the effects of cigarette smoking on periodontal conditions in specific tooth regions of older Thai men. **Method:** There were 272 current smokers, 714 former smokers, and 477 non-smokers enrolled in the present study. Differences between groups in the mean probing depth or attachment loss were compared using ancova. The relationship between smoking exposure or cessation duration and periodontal conditions was examined using linear trend analysis. **Results:** Smokers had deeper pockets and attachment loss than non-smokers. The greatest differences between smokers and non-smokers were observed in the maxillary palatal region, where current smokers had 0.88 mm greater attachment loss than non-smokers, compared to 0.36-0.60 mm observed in other tooth regions. Among the current smokers, there was a trend towards an increase in attachment loss with increasing smoking exposure in the maxillary posterior regions. However, it was not statistically significant. Among the former smokers, a better periodontal condition was observed, depending on the length of time since smoking cessation; this was most pronounced in the maxillary posterior palatal region. **Conclusions:** The palatal site of maxillary posterior teeth was the area most affected by cigarette smoke. The results suggest a possible local effect of smoking in addition to its systemic effects.

PMID: 22522950 [PubMed - indexed for MEDLINE]

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Abstract

**Background:** The aim of this study is to determine the effect of cigarette smoking on the severity of periodontitis in a cross-sectional study of older Thai adults. **Methods:** The study population consisted of 1,960 subjects (age 50 to 73 years old). All subjects received both medical and dental examinations. Periodontal examinations, including plaque score, probing depth, and clinical attachment level, were done on all teeth present in two diagonal quadrants. Sociodemographic characteristics and smoking status were obtained by questionnaires. Multinomial logistic regression was used to address the association between cigarette consumption and mean clinical attachment level.

**Results:** In this study population, 48.7% were non-smokers, 14.4% were current smokers, and 36.9% were former smokers. Current smokers had higher percentage of sites with plaque, deeper mean probing depth, and greater mean clinical attachment level than former smokers and non-smokers. The odds of having moderate and severe periodontitis for current smokers were 1.7 and 4.8 times greater than non-smokers, respectively. Former smokers were 1.8 times more likely than non-smokers to have severe periodontitis. Quitting smoking reduced the odds of having periodontitis. For light smokers (<15 packyear), the odds for severe periodontitis reverted to the level of non-smokers when they had quit smoking for > or =10 years. For moderate and heavy smokers (> or =15 packyear), the odds of having severe periodontitis did not differ from those of non-smokers when they had quit smoking for > or =20 years.
CONCLUSIONS: There was a strong association between cigarette smoking and the risk of periodontitis among older Thai adults. Quitting smoking appears to be beneficial to periodontal health.

PMID: 15857097 [PubMed - indexed for MEDLINE]

1.8. General population


Abstract

Co-occurring substance use in psychotic patients causes many subsequences including increased illness severity, decreased medication compliance, higher relapse rates, more hospitalizations, and legal problems. We aim to investigate the prevalence, patterns, associated factors and severity of substance use risk among psychotic patients in southern Thailand. Psychotic out-patients were screened with the Alcohol, Smoking, Substance Involvement Screening Test (ASSIST) for their history of substance use in the past three months and categorized as None-to-Low Risk (NLR) or Moderate-to-High Risk (MHR) levels. Multivariate logistic regression was used to examine the associated factors of substance use risk-level. The associations between substance use risk-level and emotional and behavioural symptoms, functional status and family functional status were examined using multivariate linear regression analysis. Of 663 participants screened, 322 (48.6%) used at least one substance in the past three months. Tobacco was the most common substance used (47.2%). The factors associated with a higher risk of any substance use were male gender, young age group, low level of education, being employed and being diagnosed with schizophrenia. A higher number of emotional and behavioural symptoms was significantly associated with higher substance use risk-level. In conclusion, the prevalence of substance use in psychotic patients was high and associated with their emotional and behavioural symptoms. Recommendations for implementation of screening and early intervention programs of substance-related problems in psychotic patients are important for preventing unwanted outcomes.

PMID:25515268[PubMed - as supplied by publisher]


Abstract

OBJECTIVE: To assess secondhand smoke (SHS) exposure in Thai international airports using a fine particulate indicator, particulate matter ≤2.5 μm (PM2.5), and to compare with 2012 exposure findings in international airports in the USA.

METHODS: Smoking rooms in the four largest international airports that serve the most travellers and with the most operating designated smoking rooms (DSRs) were monitored using PM2.5 monitoring equipment following an approved research protocol for assessing fine particle pollution from tobacco smoke. Monitoring was conducted inside and just outside DSRs and throughout the airport terminals in all four airports. Altogether 104 samples were taken to assess SHS exposure in four airports. Simultaneous samples were taken multiple times in a total of 11 DSRs available for sampling in the research period.

RESULTS: Levels of PM2.5 in DSRs were extremely high in all four airports and were more dangerous inside DSRs than in the US airports (overall mean=532.5 vs 188.7 μg/m³), higher outside DSRs than in the US airports (overall mean=50.1 vs 43.7 μg/m³), and at comparable levels with the US airports in the terminals away from DSRs (overall mean=13.8 vs 11.5 μg/m³). Findings show that travellers and employees in or near DSRs in the airports assessed in Thailand are being exposed to even higher levels of SHS than in US airports that still have DSRs.

CONCLUSIONS: Extremely high levels of SHS in and adjacent to DSR show that these rooms are not providing safe air quality for employees and travellers. These high levels of exposure are above those levels reported in US airports and show the need for remedial action to ensure safe air quality in international airports in Thailand.

PMID: 24638967 [PubMed - as supplied by publisher]

Abstract

INTRODUCTION: Nearly all smokers in high-income Western countries report that they regret smoking (Fong, G. T., Hammond, D., Laux, F. L., Zanna, M. P., Cummings, M. K., Borland, R., & Ross, H. [2004]. The near-universal experience of regret among smokers in four countries: Findings from the International Tobacco Control Policy Evaluation Survey. Nicotine and Tobacco Research, 6, S341-S351. doi:10.1080/14622200412331320743), but no research to date has examined the prevalence of regret among smokers in non-Western, low- and middle-income countries.

METHODS: Data were from the International Tobacco Control (ITC) Surveys of smokers in 4 Asian countries (China, Malaysia, South Korea, and Thailand); N = 9,738. Regret was measured with the statement: "If you had to do it over again, you would not have started smoking."

RESULTS: Prevalence of regret in 3 countries (South Korea = 87%, Malaysia = 77%, and China = 74%) was lower than that found by Fong et al. in the United States, Australia, Canada, and the United Kingdom (89%-90%); but was higher in Thailand (93%). These significant country differences in regret corresponded with differences in tobacco control and norms regarding smoking. The predictors of regret in the Asian countries were very similar to those in the 4 Western countries: Regret was more likely to be experienced by smokers who smoked fewer cigarettes per day, perceived greater benefits of quitting and higher financial costs of smoking, had more prior quit attempts, worried that smoking would damage their health, and felt that their loved ones and society disapproved of smoking. Regret was also positively associated with intentions to quit (r = 0.23, p < .001).

CONCLUSIONS: Across the Asian countries and high-income Western countries, the prevalence of regret varies, but the factors predicting regret are quite consistent. Regret may be an important indicator of tobacco control and is related to factors associated with future quitting.

PMID: 23509091 [PubMed - indexed for MEDLINE] PMCID: PMC3768330


Abstract

Previous studies among Buddhist monks in Thailand have reported smoking rates to be as high as 55%. Because 95% of Thais are Buddhist, monks are highly influential in establishing normative behavioral patterns. As the first population-based study on smoking among Buddhist monks in Thailand, this study aims to determine the smoking prevalence in six regions of the country, and to examine smoking knowledge, risk perceptions, behaviors, and associated demographics among full-fledged and novice monks (n = 6,213). Results demonstrated that the overall prevalence for current smoking monks is 24.4% (95% confidence interval [24.453, 24.464]), with regional differences ranging from 14.6% (North) to 40.5% (East). Findings suggest that integrating prevention and cessation programming into religious courses may be one avenue for reaching many incoming monks. Further, involving monks in tobacco control education and setting a nonsmoking standard among them is vital to the success of reducing smoking rates among the general population in Thailand.

PMID: 22203188 [PubMed - indexed for MEDLINE]


Abstract

BACKGROUND: Although numerous studies have shown the health behaviors of ex-smokers to be better than those in regular smokers, the differences in health behaviors among ex-smokers at varying durations of cessation have not been investigated. This study aims to examine the relationship between different durations of smoking cessation and health behaviors.
METHODS: Data on dietary intake, alcohol consumption, physical activity, and smoking behavior from the Thai National Health Examination Survey IV for subjects aged 15-98 years (n=19,371) were included in the analysis. Trends between health behaviors among regular smokers, ex-smokers with different durations of smoking (<1 year, 1-10 years, >10 years), and never smokers were tested. Logistic regression models adjusted for sex, age, and economic status were used.

RESULTS: The prevalences of regular smoking, ex-smoking, and never smoking were 22.3%, 12%, and 65.7%, respectively. A trend was found for consumption of fruit, beans and meats, dairy and soy milk, whole-grain products, nutritional supplements, and eating habits. Average daily alcohol consumption (g) was lowest among ex-smokers who had quit for >10 years ex-smokers (16.4) followed by 1-10 years ex-smokers (27.2), and <1 year ex-smokers (33.7).

CONCLUSION: A longer duration of smoking cessation correlated with better health behaviors.

PMID: 22569485 [PubMed - indexed for MEDLINE]


Abstract

In Thailand, the prevalence of smoking has steadily declined over the past 20 years, suggesting an effective tobacco control policy. However, the prevalence has recently stabilised and youth smoking now appears to be on the rise. Tobacco use is the third highest risk factor contributing to the burden of disease in the country. This is an issue of concern and led to the present review of tobacco control measures in Thailand. The present evidence-based review shows that Thailand's tobacco control measures are relatively strong and comply well with the WHO Framework Convention on Tobacco Control in terms of taxation, advertisement through popular media, and warning labels on cigarettes and other tobacco product packages. However, challenges remain in dealing with highly prevalent roll-your-own cigarettes, strict prohibition of tobacco sale to underage youths, household smoking, illicit trade of tobacco products, viable tobacco crop diversification for domestic tobacco growers and liability. If these challenges are met, the prevalence of tobacco consumption could possibly be further reduced.

PMID: 21791510 [PubMed - indexed for MEDLINE]


Abstract

BACKGROUND: Many tobacco control policies have been implemented to reduce tobacco use throughout the world including Thailand. This study made use of surveillance data of the past two decades to examine age-period-cohort effects on smoking in Thailand.

METHODS: Six nationally representative datasets collected during 1991-2007 were used to determine the prevalence of current smoking, former smoking, and never smoking. Effects of age-period-cohort on current, former, and never smoking were examined using age-period-cohort analysis.

RESULTS: Overall tobacco consumption in Thailand has substantially decreased during the past two decades. However, a sluggish decline of smoking trend has been observed in the last decade. Age-period-cohort models showed significant effects of all three of these component factors on current smoking, former smoking, and never smoking, with the exception of an age effect only on former smoking in females. Age-specific prevalence of current smoking in successive birth cohorts increased with age towards 27 years in males and then fell with age while smoking cessation tended to increase with age. Newer cohorts tended to smoke less but were less likely to quit smoking than those in earlier cohorts.

CONCLUSIONS: Although newer cohorts had less susceptibility to smoking, smokers in newer cohorts had lower odds of smoking cessation. Effective smoking cessation methods should be promoted.

PMID: 22393993 [PubMed - indexed for MEDLINE]
Abstract

The majority of the world’s 1.3 billion tobacco users are men, but female use is increasing. To examine differences in tobacco use and awareness of tobacco marketing by sex, CDC and health officials in Bangladesh, Thailand, and Uruguay (among the first countries to report results) analyzed 2009 data from a newly instituted survey, the Global Adult Tobacco Survey (GATS). This report summarizes the results of that analysis, which indicated wide variation among the three countries in tobacco use, product types used, and marketing awareness among males and females. In Bangladesh and Thailand, use of smoked tobacco products was far greater among males (44.7% and 45.6%, respectively) than females (1.5% and 3.1%, respectively). In Uruguay, the difference was smaller (30.7% versus 19.8%). Use of smokeless tobacco products in Bangladesh was approximately the same among males (26.4%) and females (27.9%), but females were significantly more likely to use smokeless tobacco in Thailand (6.3% versus 1.3%), and use in Uruguay by either sex was nearly nonexistent. Males in Bangladesh were twice as likely as females to notice cigarette advertising (68.0% versus 29.3%), but the difference between males and females was smaller in Thailand (17.4% versus 14.5%) and Uruguay (49.0% versus 40.0%). In all three countries, awareness of tobacco marketing was more prevalent among females aged 15–24 years than older women. Comprehensive bans on advertising, sponsorship, and promotion of tobacco products, recommended by the World Health Organization (WHO), can reduce per capita cigarette consumption if enforced.

PMID: 20508591 [PubMed - indexed for MEDLINE]


Abstract

OBJECTIVE: Study current smoking situation among Royal Thai Police officers nationwide.

MATERIAL AND METHOD: 20,000 questionnaires about smoking behavior, amount of cigarettes smoked per day, and staging of smoking cessation were distributed between March and August 2008 to 1) the Office of the Top Management, 2) every bureau nationwide, 3) every division of any police bureau, 4) six biggest police stations from every division, and 5) three subdivisions from every division in supporting bureau. The Police General Hospital, Police Education Bureau, Police Cadet Academy, Office of Inspector General, and Office of the Royal Court Security Police were excluded from this survey.

RESULTS: Of all 20,000 questionnaires distributed, 14,231 completed questionnaires were received during the five-month study period. Nationwide, 30.9% of Thai police smoke, 33.4% of male police officers smoke while only 3.3% of female police officers do. Among five groups classified by organizational structure, the Metropolitan Police Bureau has the highest smoking rate of 33.9%. Detective police smoking rate of 40.3% is the highest among field of police work. Ten point one percent of the police officers who currently smoke are addicted to nicotine in the high level of 20 or more cigarettes per day. However 60.4% of the police officers who currently smoke attempt to quit smoking at least once a year but fail and 84.7% of the entire police officers agree with the smoke-free workplace policy, which has already been implemented and 76.0% of the police officers who currently smoke agree with the 100% smoke-free police station policy.

CONCLUSION: The smoking rate of Thai police is higher than the average smoking rate of Thai population. In order to decrease the smoking rate among Thai police, the 100% smoke-free police station policy should be implemented. This policy aims to counsel police officers who currently smoke about nicotine withdrawal symptoms in the short term, and to alter behavior and attitude about smoking in the long term.

PMID:19845245[PubMed - indexed for MEDLINE]

**Abstract**

**OBJECTIVE:** To test whether differences of history and strength in tobacco control policies will influence social norms, which, in turn, will influence quit intentions, by influencing smokers’ regret and rationalization.

**DESIGN:** The data were from the International Tobacco Control (ITC) Policy Evaluation Southeast Asia Survey, a cohort survey of representative samples of adult smokers in Thailand (N = 2,000) and Malaysia (N = 2,006). The survey used a stratified multistage sampling design.

**MAIN OUTCOME MEASURES:** Measures included regret, rationalization, social norms, and quit intention.

**RESULTS:** Thai smokers were more likely to have quit intentions than Malaysian smokers. This difference in quit intentions was, in part, explained by the country differences in social norms, regret, and rationalization. Reflecting Thailand’s history of stronger tobacco control policies, Thai smokers, compared with Malaysian smokers, perceived more negative social norms toward smoking, were more likely to regret, and less likely to rationalize smoking. Mediation analyses revealed that these differences in social norms, accounted, in part, for the country-quit intention relation and that regret and rationalization accounted, in part, for the social norm-quit intention relation.

**CONCLUSION:** The results suggest that social norms toward smoking, which are shaped by tobacco control policies, and smokers’ regret and rationalization influence quit intentions.

PMID: 19594270 [PubMed - indexed for MEDLINE]


**Abstract**

**BACKGROUND:** Thailand is internationally renowned for its stringent tobacco control measures. In Thailand, a regulation banning smoking in air-conditioned hotel lobbies was issued in late 2006, causing substantial apprehension within the hospitality industry. A survey of tourists’ attitudes toward the ban was conducted.

**METHODS:** A cross-sectional survey of 5550 travellers staying in various hotels in Bangkok, Surat Thani, Phuket, Krabi and Songkhla provinces, October 2005 to December 2006. Travellers aged 15 years or older with a check-in duration of at least one day and willing to complete the questionnaire were requested by hotel staff to fill in the 5-minute questionnaire at check-in or later at their convenience.

**RESULTS:** Secondhand cigarette smoke was recognised as harmful to health by 89.7% of respondents. 47.8% of travellers were aware of the Thai regulation banning smoking in air-conditioned restaurants. 80.9% of the respondents agreed with the ban, particularly female non-smokers. 38.6% of survey respondents indicated that they would be more likely to visit Thailand again because of the regulation, 53.4% that the regulation would not affect their decision and 7.9% that they would be less likely to visit Thailand again.

**CONCLUSION:** Banning smoking in air-conditioned hotel lobbies in Thailand is widely supported by tourists. Enforcement of the regulation is more likely to attract tourists than dissuade them from holidaying in Thailand.

PMID: 19364754 [PubMed - indexed for MEDLINE] PMCID: PMC2679185


**Abstract**

**PURPOSE:** To evaluate knowledge of betel quid (BQ) vendors in relation to traditional chewing and smoking habits in Northern Thailand.
MATERIALS AND METHODS: Interviews of vendors selling BQ and other traditional chewing and smoking items were conducted. Questions related to side effects of BQC were included, as well as questions focusing on why traditional chewing and smoking habits were on the decline.

RESULTS: Nineteen stalls in 10 markets were visited and 18 vendors were interviewed (16 women, 2 men, average age 55.0 years, range 28-75 years). Vendors had been present for an average of 21.8 years (range 2-60 years). The number of customers buying BQ regularly was 2-3 per day. More elderly women than men bought BQ. Side effects of BQ on the oral mucosa were largely unknown to vendors. Most respondents thought BQ to be good for teeth. Reasons why young people have given up the BQ habit were black teeth. Miang (fermented tea leaves) and khi yo (traditional cigar) were rarely sold and were considered vanishing habits.

CONCLUSIONS: BQ vendors had poor knowledge of the side effects of BQC. BQ vendors unanimously considered traditional habits such as chewing of BQ, miang and smoking of traditional cigars to be on the decline. Nowadays, most of these items are bought to be offered during ceremonies. Generally, traditional habits seem to be replaced by 'modern' lifestyle habits such as cigarette smoking and alcohol consumption. With these changes, general and oral disease patterns will eventually occur.

PMID: 17977297 [PubMed - indexed for MEDLINE]

2. Tobacco related Mortality & Morbidity


Abstract

Alkaloid molecules can act, depending on a type of amine functionality present in alkaloids, as either hydrogen acceptor or hydrogen-donor for hydrogen bonding that is critically important for the interaction (binding) between targets (enzymes, proteins and receptors) and drugs (ligands). Because of this unique property, alkaloid scaffolds are therefore present in several drugs and lead compounds. This review highlights alkaloid scaffolds in drugs, particularly those recently approved in 2012; it also covers the scaffolds in leads and drug candidates which are in clinical trials and preclinical pipeline. The review focuses on three therapeutic areas including treatments of cancer, tuberculosis, and tobacco cessation. Alkaloid scaffolds in drugs and leads are inspired by those of naturally occurring alkaloids, and these scaffolds include pyridine, piperidine, quinoline, quinolinone, quinazoline, isoquinoline, indole, indolinone, isoidole, isoxazole, imidazole, indazole, thiazole, pyrazole, oxazolidinone, oxadiazole, and benzazepine. In addition to medicinal chemistry aspects, natural products possessing an individual alkaloid scaffold, as well as the mechanism of action of drugs and leads, are also discussed in this review.

PMID: 24359196 [PubMed - indexed for MEDLINE]


Abstract

Chronic obstructive pulmonary disease (COPD) is a global health problem that poses a heavy burden on most countries in the Asia-Pacific region (including Thailand). When compared to industrialised Western countries, the COPD burden in the Asia-Pacific region is higher in terms of the number of deaths, years spent living with disability and years of life lost. Given the high prevalence of tobacco smoking, poor indoor and outdoor air quality and the aging population in many Asian countries, urgent actions need to be taken to reduce the development, morbidity and mortality of this disease.

PMID: 18544193 [PubMed - indexed for MEDLINE]

Abstract

Chronic obstructive pulmonary disease (COPD) is a leading cause of morbidity and mortality worldwide. The World Health Organization (WHO) estimated that COPD is currently the seventh leading cause of death and disability worldwide, but will rise to the fifth position by 2020. The estimated prevalence of COPD worldwide in 2001 was 1013/100,000 population; it was highest in the Western Pacific Region and lowest in Africa. The mortality from COPD followed the same pattern. The prevalence of smoking is slowly decreasing in the industrialised world and rising in developing countries, especially in Asia (including Thailand) and Africa. Cigarette consumption per adult has also decreased in the Americas, remained the same in Europe but increased in all other regions, especially the Western Pacific. Indoor air pollution from combustion of biomass/traditional fuels and coal, previous tuberculous infection, outdoor air pollution and childhood respiratory infections are other important risk factors for COPD in developing countries. The rise in morbidity and mortality from COPD will be most dramatic in Asian and African countries over the next two decades, mostly due to progressive increase in the prevalence of smoking. As developing countries can ill afford the added economic burden of COPD and other smoking-related diseases, there is an urgent need for multi-dimensional actions in reducing the main risk factor of cigarette smoking.

2. Cancers related to tobacco use

2.1. Head and Neck cancers


Abstract

BACKGROUND: This study aimed to determine the association between betel quid chewing and the occurrence of upper aerodigestive tract (UADT) cancers.

METHODS: A cohort of 17,388 subjects, recruited and interviewed over the 1990-2001 period, in Khon Kaen, Thailand, was followed up until 2011. The data were linked to the Khon Kaen Population-Based Cancer Registry.

RESULTS: The prevalence of betel quid chewing was 15.9%, with a female predominance (97.7%); the mean age of chewers was 57.7 years (SD 6.6). The overall incidence of UADT cancers from the cohort was 14.7 per 100,000 person-years, whereas the incidence among the chewers was 45.7. Betel nut chewing was the only major risk factor for UADT cancers in this population (HR=5.26, 95%CI=2.51-11.0), while weak associations were found for tobacco smoking and alcohol (HR=1.16, 95%CI=0.45-3.01 and 1.47, 95%CI=0.72-3.03 respectively).

CONCLUSIONS: We found betel quid chewing to be a main risk factor for UADT cancers, resulting in a higher incidence in females. However, further study is required to explore the potential risk factors among non-chewers, non-smokers, and non-drinkers.

PMID:23991999[PubMed - indexed for MEDLINE]


Abstract

Oral cancer is a common site of head and neck cancer, and is relatively frequent in Northeast Thailand. The objective of this hospital-based, case-control study was to determine associations with risk factors. A total of 104 oral cancer cases diagnosed between July 2010 and April 2011 in 3 hospitals were matched with control subjects by age, sex and hospital. Data were collected by personal interview. There were significant associations between oral cancer and tobacco smoking (OR=4.47; 95%CI=2.00 to 9.99), alcohol use among women (OR=4.16; 95%CI=1.70 to 10.69), and betel chewing (OR=9.01; 95%CI=3.83 to 21.22), and all three showed dose-response
effects. Smoking is rare among Thai women (none of the control women were smokers), but betel chewing, especially among older women, is relatively common. We did not find any association between practicing oral sex and oral cancer.

PMID:23244115[PubMed - indexed for MEDLINE]


Abstract

BACKGROUND: The incidence of nasopharyngeal carcinoma (NPC) varies substantially worldwide, with an endemic pocket in Southeast Asia.

METHOD: We assessed lifestyle and genetic factors in relation to NPC risk among 681 NPC cases and 1,078 controls from Thailand. Evaluated lifestyle factors included traditionally preserved foods, tobacco smoking, betel quid chewing, and alcohol consumption. Genetic factors included six variants implicated in a previous genome-wide association study (GWAS) of NPC and three variants residing near the CHRNA3 and TERT genes that were linked to lung cancer risk in Asian populations. Odds ratios (OR) and 95% confidence intervals (95% CI) were estimated using unconditional logistic regression.

RESULTS: Frequent consumption of fermented vegetables was associated with increased NPC risk (OR of consumption ≥ weekly vs. ≤ rare 1.78, 95% CI 1.24-2.55, p (trend) = 0.005), as was tobacco smoking (p (trend) < 0.001), former and current smokers displaying OR of 1.57 (95% CI 1.10-2.30) and 2.00 (95% CI 1.48-2.71) compared to never smokers, respectively. Four out of six genetic variants implicated in the recent NPC GWAS were associated with NPC risk (p (trend) ≤ 0.03), as well as two variants (rs402710 and rs2736098) on the TERT locus at 5p15.33 (p = 0.004 and p = 0.04, respectively).

CONCLUSIONS: These results strengthen our previous observation that tobacco smoking is an important risk factor of NPC in this population. Four out of six genetic variants identified in a recent NPC GWAS were confirmed, and the association noted with variants on 5p15.33 suggests that this locus is involved in NPC susceptibility, representing a novel finding in NPC epidemiology.

PMID:23085811[PubMed - indexed for MEDLINE]


Abstract

OBJECTIVE: To study epidemiology, risk factors and overall survival rate of patients with laryngeal cancer.

MATERIAL AND METHOD: A chart review of the patients diagnosed with laryngeal cancer in Songklanagarind Hospital over the past 10 years was performed.

RESULTS: Two hundred eighty nine patient cases were reviewed, in which 106 patients were diagnosed with supraglottic cancer 180 with glottic cancer and three with subglottic cancer. The majority of the patients was male, active smokers, alcohol consumers and had a histology showing squamous cell carcinoma. Disease characteristics indicated that most cases of supraglottic cancer were in a locally advanced stage (84.4%), whereas most patients with glottic cancer were diagnosed with early stage (61.3%). Hoarseness was the most common presenting symptom. Regarding the complete response rate, glottic cancer was superior to supraglottic cancer. For glottic cancer treatments, surgery alone or primary radiation showed good 5-year overall survival rates with no difference in modality results (87.5% versus 83.2%). In supraglottic cancer treatments and contrary to glottic cancer surgery with postoperative radiation improved the 5-year overall survival rate in comparison with primary radiation alone (52.2% versus 39.2%).
CONCLUSION: Primary radiation or surgery alone is suitable treatments for early stage laryngeal cancer especially in glottic cancer whereas surgery with postoperative radiation should be the treatment for advanced stage laryngeal cancer.

PMID:21560844[PubMed - indexed for MEDLINE]


Abstract

Nasopharyngeal cancer (NPC) is rare in most populations but common in Southern China and Southeast Asia. To understand the role of environmental exposures on risk of NPC, a case-control study was conducted among 327 newly diagnosed case of NPC and 327 controls matched to case on sex, age and geographic residence. Information was collected about demographic variables, cigarette smoking, alcohol drinking, eating habits, past history of disease, family history of cancer and a lifetime history of every job that was held for one year or longer. The result indicates that cigarette smoking was associated with an increased risk of NPC (OR=2.41, 95% CI 1.61-3.6). There was indication of increased risk with a history chronic ear or nose disease (OR=2.71, 95% CI 1.45-5.06). Occupational exposure to wood dust was also associated with a higher risk (OR=1.63, 95% CI 1.02-2.61). Furthermore, lower education was found to be positively associated with NPC (OR=2.71, 95% CI 1.45-6.06). There was no association between NPC and salted fish intake (OR=1.38, 95% CI 0.84-2.25) or alcohol consumption (OR=0.88, 95% CI 0.58-1.33). Our results suggest that cigarette smoking, past history of ear or nose disease and occupational exposure to wood dust may play a role in the development of NPC in the Thai population.

PMID:21133603[PubMed - indexed for MEDLINE]


Abstract

AIM: To investigate p53 mutations in esophageal cancer in a high-risk population, and correlate them with smoking, alcohol consumption and betel chewing.

METHODS: One hundred and sixty-five tumor samples of esophageal squamous cell carcinoma (ESCC) obtained from a university hospital in Songkhla province, Southern Thailand were investigated for p53 mutations in exons 5-8, using polymerase chain reaction-single strand conformation polymorphism analysis, followed by direct sequencing. A polymerase chain reaction-restriction fragment length polymorphism (RFLP) assay was additionally used to confirm possible germline mutation in intron 6. A history of risk habits was obtained by interviews. The association between risk habits and mutation frequency was evaluated using the χ(2) test.

RESULTS: The studied specimens were from 139 male and 26 female patients with ESCC, treated at Songklanagarind Hospital. Most of the patients were smokers (86.7%) and alcohol consumers (72.73%), and 38.3% were betel chewers. Forty-three mutations of the p53 gene were detected in 25.5% (42/165) of tumor samples. Mutations were most commonly found in exon 5 (25.6%) and exon 8 (25.6%). Mutations in the hot-spot codon 248 were found in four cases (9.3% of all mutations). G:C→C:G (30.23%), G:C→A:T (27.90%) and G:C→T:A (16.28%) were the prevalent spectra of mutations. Unexpectedly, among 10 intronic mutations, eight cases harbored a similar mutation: G→C substitution in intron 6 (nucleotide 12759, GenBank NC_000017). These were additionally confirmed by the RFLP technique. Similar mutations were also detected in their matched blood samples using RFLP and direct sequencing, which suggested germline mutations. There was no significant correlation between risk habits and p53 mutation frequency.

CONCLUSION: A proportion of Thai ESCC patients harbored specific intronic p53 mutations, which might be germline mutations. Further studies are needed to explore this novel finding.

PMID:21072901[PubMed - indexed for MEDLINE] PMCID:PMC2980687
2.1.2. Thoracic cancers


Abstract

BACKGROUND: Despite anti-smoking campaigns, smoking prevalence among Thai males aged 30 or older is high, at around 50%. The purpose of this study was to determine the relationship between smoking and mortality in a rural Thai community.

MATERIALS AND METHODS: Subjects enrolled into the Khon Kaen cohort study between 1990 and 2001 were followed up for their vital status until 16th March 2012. The death resource was from the Bureau of Policy and Strategy, Ministry of Interior, Thailand. A Cox proportional hazards model was used to analyse the association between smoking and death, controlling for age, education level and alcohol drinking, and confidence intervals were calculated using the floating risk method.

RESULTS: The study recruited 5,962 male subjects, of whom 1,396 died during a median 13.5 years of follow-up. Current smokers were more likely to die than never smokers after controlling for age, education level and alcohol drinking (HR, 95%CI: 1.41, 1.32-1.51), and the excess mortality was greatest for lung cancer (HR, 95%CI: 3.51, 2.65-4.66). However, there was no increased risk with increasing dose of tobacco, and no difference in risk between smokers of yamuan (hand-rolled cigarettes) and manufactured tobacco.

CONCLUSION: Mortality from cancer, particularly lung cancer, and from all causes combined is dependent on smoking status among men in rural Thailand, but the relative risks are lower than have been reported from studies in high income countries, where the tobacco epidemic is more established.

PMID:23725189[PubMed - indexed for MEDLINE]


Abstract

OBJECTIVES: The Lampang Province is situated in the northern region of Thailand. Incidence rates of lung cancer are high for Asian standards, particularly in women. This study was conducted to quantify the risk of lung cancer associated with exposures prevalent in the area and to investigate possible interactions with genetic susceptibility. The presence of several large open-cast coal mines from 1955 close to electricity-generating plants was a particular focus of concern.

METHODS: Two-hundred and eleven cases of primary lung cancers diagnosed in 1993 to 1995 and residents in the province were recruited at the Lampang Provincial Hospital (main referral center for treatment of the disease). Two sets of controls, frequency-matched to the cases by sex and age, were recruited (a) from the resident population (202 interviewed) and (b) from patients admitted to the hospital for diseases predominantly unrelated to tobacco smoking (211 interviewed). Sociodemographic information, complete residential history, and characteristics of the household (place of cooking, cooking fuel, and heating fuels), occupational history, and history of tobacco smoking were obtained by interview. Cases and controls (approximately 50% of the population-based series) provided a blood sample. A point source air pollution exposure index was calculated for each village/township reported in residential histories based on the linear distance from the Mae Moh Center (the area of the electricity-generating plants), the year-specific gaseous (SO(2) and NO(2)) or total suspended particulate emissions from the Mae Moh Power Plant, and the percentage of wind from the center. Odds ratios (OR) for the disease associated with categorical variables were estimated within unconditional logistic regression. Extraction of genomic DNA and genotyping of variants in CYP1A1 and GSTM1 were conducted to assess the extent of modification of risk by these genes that are involved in the metabolism of polycyclic aromatic hydrocarbons, a common component of the exposures.

RESULTS: Overall, there was no evidence of relevant differences in the socioeconomic level of the three groups. The two control sets were similar with respect to lifelong tobacco habit and were subsequently pooled in
analyses. Never-smokers were 7% of men and 33% of women. Smoking of local traditional products unfiltered and high in tar content is a common habit in the rural female population. ORs associated with smoking increased with duration of the habit and average daily amount, being 4.9 [95% confidence interval (95% CI), 2.5-9.7] for smokers of > or =7 cigarettes/d and 3.3 (95% CI, 1.7-6.2) for duration of 41 years or longer compared with nonsmokers. Smoking of local products was associated with an independent OR of 3.1 (95% CI, 1.7-5.6) adjusted for lifelong cumulative amount of tobacco smoked. Although most smokers had the habit for at least 16 years, the daily consumption was low compared with Western standards. Other potential sources of exposure to lung carcinogens (emission from the power-generating plants and domestic burning of coal and wood for cooking and heating) were not associated with increased risk of lung cancer. None of the three polymorphisms examined increased the risk of lung cancer or modified the risk associated with tobacco smoking.

CONCLUSION: In this rural population, 96% of male and 64% of female lung cancer incidence were explained by tobacco smoking. None of the potential sources of air pollution deriving from the combustion of coal and wood, or polymorphisms in the CYP1A1 gene or deletion of the GSTM1 had an effect on the risk of lung cancer, either together or separately.

PMID:23725189[PubMed - indexed for MEDLINE]


Abstract

OBJECTIVES: To examine and compare the clinical manifestations of lung cancer between the age groups of 40 years or less and over 40 years at Maharaj Nakorn Chiang Mai Hospital from January 2002 - December 2003.

MATERIAL AND METHOD: Six hundred and nineteen patients with confirmed pathological cell type lung cancer were newly registered.

RESULTS: The mean age was 60.1 years and male to female ratio 1.79:1. Their smoking history was presented in 72% of patients, with cough being the most common symptom followed by weight loss, dyspnea, chest pain, and hemoptysis with a median duration of 2 months. Mass or nodule was the most common radiographic finding, and adenocarcinoma was the most common pathological cell type. Most of the patients (82.4%) presented in the advanced stage. There were 19 patients (3.1%) aged equal to 40 years or less. In this group, chest pain and adenocarcinoma were presented more significantly, while a smoking history was found to be less significant in females. The duration of symptoms in this group tended to be shorter (1.3 months), but not statistically significant. More than 80% of both patient groups presented in the advanced stage.

CONCLUSION: Lung cancer in the young is uncommon, but most clinical manifestations are not different from older patients. The less significant smoking history, especially in females, tendency of shorter duration of symptoms, and more frequent adenocarcinoma in the younger patients may have some factors that are associated and should be studied further.

PMID:16614107[PubMed - indexed for MEDLINE]


Abstract

Abnormalities of p53 gene can lead to the production of p53 antibodies (p53-Abs) in the serum of cancer patients. This study was designed to investigate the prevalence of p53-Abs in 133 lung cancer patients and the distribution of these antibodies to clinicopathologic features and smoking status. Twenty five (18.8%) lung cancer patients were found to have p53-Abs. The presence of p53-Abs did not correlate with sex or age but showed frequent association with tumors of squamous cell carcinoma (31%) in comparison with adenocarcinoma (13.6%) (P=0.052). There was a statistically significant difference in the incidence of p53-Abs between early disease group (stage I-II) and the advanced group (stage III-IV) (P=0.036), however, there was no relationship between the presence of p53-Abs and overall survival. Interestingly, the frequent of p53-Abs was higher in smokers (27.1%) than in non-smokers (13.6%), though the difference was of borderline of statistical significance.
An annotated bibliography of scientific studies done on tobacco topic in WHO South-East Asia Region countries

(P=0.061). These findings suggested that p53-Abs could be a potential biomarker for the study of individual with lung cancer.

PMID:12609568[PubMed - indexed for MEDLINE]

2.1.3. Abdominal cancers


Abstract

OBJECTIVE: Cholangiocarcinoma (CCA) is the most common malignancy in a Northeast Thai population. Smoking and alcohol drinking are associated with the production of free radical intermediates, which can cause several types of DNA lesions. Reduced repair of these DNA lesions would constitute an important risk factor for cancer development. We therefore examined whether polymorphisms in DNA base-excision repair (BER) genes, XRCC1 G399A and OGG1 C326G, were associated with CCA risk and whether they modified the effect of smoking and alcohol drinking in the Thai population.

DESIGN: A nested case-control study within the cohort study was conducted: 219 participants with primary CCA were each matched with two non-cancer controls from the same cohort on sex, age at recruitment and the presence/absence of Opisthorchis viverrini eggs in stools. Smoking and alcohol consumption were assessed on recruitment. Polymorphisms in BER genes were analysed using a PCR with high-resolution melting analysis. The associations were assessed using conditional logistic regression.

RESULTS: Our results suggest that, in the Thai population, polymorphisms in XRCC1 and OGG1 genes, particularly in combination, are associated with increased susceptibility to CCA, and that their role as modifiers of the effect of smoking and alcohol consumption influences the risk of CCA.

CONCLUSIONS: Better ways of reducing habitual smoking and alcohol consumption, targeted towards subgroups which are genetically susceptible, are recommended. CCA is a multifactorial disease, and a comprehensive approach is needed for its effective prevention. This approach would also have the additional advantage of reducing the onset of other cancers.

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Abstract

BACKGROUND: Stomach cancer is not common in Thailand but the life styles of the Thai population are changing to become more Western so that information for planning control programme of stomach cancer is necessary. The highest incidence rates of this neoplasm are found in Eastern Asia, ranging from age-standardized rates of 95.5/105 (men) and 40.1/105 (women) in Yamagata, Japan to 4.1/105 (men) and 2.1/105 (women) in Khon Kaen, Northeast of Thailand. In Thailand, the estimated age-standardized incidence rates in 1993, 1996 were 4.9/105, 4.1/105 in men and 3.0/105, 2.6/105 in women. Risk factors for stomach cancer in Thai population are unclear, but possibly include low intake of vegetables and fruits, alcohol drinking, tobacco smoking and high intake of salt.

OBJECTIVE: To investigate various aspects of dietary factors, smoking, and alcohol drinking in determining risk of stomach cancer in Thai population.

METHODS: A case-control study was conducted in Khon Kaen, Thailand during 2002-2006, to study the role of these factors in stomach cancer. 101 stomach cancer cases and 202 matched controls (case: control = 1:2) by sex, age (≥ 3 years) and region were recruited from Srinagarind Hospital and Khon Kaen Regional Hospital, in Khon Kaen Province. All of cases were histologically confirmed. Controls had a variety of diseases, the main
ones being disease of the eye. Information on dietary habits, alcohol drinking and smoking were collected by a structured questionnaire, blood samples were collected for further study.

RESULTS: The distribution of the general characteristics by case-control status, the distribution of age and sex were similar in cases and controls. In the final analysis, the factors that found to be higher risk but not statistically significant were long-term filter cigarette smoking (OR=1.9, 95%CI: 0.85-4.50), long-term alcohol consumption (OR=1.2, 95%CI: 0.51-2.60) and low intake of vegetables and fruits (OR=1.2, 95%CI: 0.74-1.96). A high intake of vegetable oil (OR=4.5, 95%CI: 1.00.-20.17) was found to be associated with increased risk, and similar tendencies were noted for pork oil (OR=1.4, 95%CI: 0.63-3.01) and jeaw prik (mainly chilly with plara broth) (OR=1.2, 95%CI: 0.76-2.01).

CONCLUSION: Our study confirmed protective effects of a high intake of fruits and vegetables against stomach cancer development and showed a high intake of sauces to increase risk of stomach cancer as in other countries in Asia.

PMID: 18439078 [PubMed - indexed for MEDLINE]

2.1.4. Other cancers


Abstract

Cervical cancer is a serious public health problem in Thailand. We investigated possible risk factors for cervical cancer including HPV infection, p53 polymorphism, smoking and reproductive history among women in Northeast Thailand using a case control study with 177 cases and age-matched controls. Among the HPV carriers, a significantly increased risk for cervical cancer with an OR of 36.97 (p<0.001) and an adjusted OR of 38.07 (p<0.001) were observed. Early age at first sexual exposure, and multiple sexual partners increased the risk of cervical cancer with ORs ranging between 1.73-2.78 (p<0.05). The interval between menarche and first sexual intercourse<6 years resulted in a significant increase in the risk for cervical cancer with ORs ranging between 3.32-4.09 and the respective adjusted OR range for the 4-5 and 2-3 year-old groups were 4.08 and 2.92. A higher risk was observed among subjects whose partner had smoking habits, whether currently or formerly; with respective ORs of 3.36 (p<0.001) and 2.17 (p<0.05); and respective adjusted ORs of 2.90 (p<0.05) and 3.55 (p<0.05). Other smoking characteristics of the partners including smoking duration≥20 years, number of cigarettes smokes≥20 pack-years and exposure time of the subject to passive smoking≥5 hrs per day were found to be statistically significant risks for cervical cancer with adjusted ORs of 3.75, 4.04 and 11.8, respectively. Our data suggest that the risk of cervical cancer in Thai women is substantially associated with smoking characteristics of the partner(s), the interval between menarche and first sexual intercourse as well as some other aspects of sexual behavior.

PMID:23317205[PubMed - indexed for MEDLINE]

2.2. Non-cancerous diseases

2.2.1. Tuberculosis


Abstract

In this hospital-based case-control study, children attending Siriraj Hospital and Queen Sirikit National Institute of Child Health from 1 December 2002 to 30 June 2003 were studied to define factors associated with TB in BCG immunized children (n = 260). Subjects of the same age and sex were divided into case and control groups by tuberculosis status. Caregivers were interviewed with a structured questionnaire. Data were analyzed by univariate analysis and multivariate analysis for biological factors (birth weight, health status, nutritional status), socioeconomic factors (parental education, education of caregiver, parental occupation, household incomes, and stability of household incomes), and environmental factors (history of contact with a tuberculosis patient, housing ventilation, child's bedroom ventilation, biomass smoke, passive smoking, crowded family and crowded in child's bedroom). Our findings show that children who had contact with TB patients had a very high risk of tuberculosis, even though they were vaccinated at birth. The risks vary according to the closeness level: very close (OR 85.67,
95% CI = 11.33-647.79), close (OR 31.11, 95% CI = 3.93-246.22) and not close (OR 32.70, 95% CI = 4.18-255.94). In order to identify the effect of other variables, the data was reanalyzed only in the group with no history of TB patient contacts (n = 192). Living in a crowded family, which was reflected by an average of 5 or more persons per room, also increased the risk (OR 11.18, 95% CI = 2.35-53.20). The other factor that increased the risk for tuberculosis was passive smoking. Children who were exposed to passive smoking had a 9.31 times increased risk of getting tuberculosis (95% CI = 3.14-27.58). These findings suggest that the public health department must develop a TB surveillance system in high TB prevalence areas, and in high density communities, and encourage smokers in every family to avoid smoking near children. Latent tuberculosis treatment recommendations for TB control cluster, as set by the Bureau of AIDS/TB and STIs, must be implemented in all health centers and an effective TB control program must be reinforced.

PMID: 15906658 [PubMed - indexed for MEDLINE]


Abstract

The purpose of this hospital-based case-control study is to determine the effect of passive and active smoking on pulmonary TB in adults. The study subjects were 100 new pulmonary TB cases diagnosed at TB Division, and age-sex matched 100 non-TB cases from patients admitted to Taksin Hospital and healthy subjects who came for annual physical check-up at either the outpatient clinic of the TB division or Taksin Hospital, during May 2001 to October 2001. All subjects had blood tests and only persons who were HIV-negative, DM-negative and free of other lung diseases were included. Data were collected by direct interview using questionnaires. Multivariate analysis of cigarette smoking related to pulmonary TB in adults was performed. The factors related to pulmonary TB in adults were current active smoking regardless of passive smoking exposure. There was a significant association between early age at initiation of smoking and TB. Active (current + ex-active) smokers who started smoking at age 15-20 years had a higher risk of pulmonary TB compared to others (OR = 3.18, 95% CI = 1.15-8.77); as well as the long duration of smoking: persons who had smoked >10 years had a higher risk of pulmonary TB (OR = 2.96, 95% CI = 1.06-8.22). There was a relationship between pulmonary TB and the amount of smoking exposure. Those who smoked >10 cigarettes/day (OR = 3.96, 95% CI = 1.26-12.60) or >3 days/week (OR = 2.68, 95% CI = 1.01-7.09) had higher risk of pulmonary TB compared to non-smokers. Passive smokers who were exposed to tobacco smoke >3 times/week outside the home had a higher risk of pulmonary TB than those with exposure < or =3 times/week (OR = 3.13, 95% CI = 1.07-9.17). It was also found that the effects of passive smoking in the office and/or neighborhood were strong. Persons with such exposures had a higher risk of pulmonary TB than no exposure or exposure < or =3 times/week from either or both places (OR = 4.62, 95% CI = 1.68-14.98). Therefore, an effective anti-smoking campaign is expected to have a positive repercussion on TB incidence. Smoking cessation must be considered and promoted by all levels of health care providers.

PMID: 15272772 [PubMed - indexed for MEDLINE]

2.2.2. Cardiovascular diseases


Abstract

BACKGROUND: Smoking cessation is a high-priority intervention to prevent CVD events and deaths in developing countries. While several interventions to stop smoking have been proved successful, the question of how to increase their effectiveness and practicality in developing countries remains. In this study, a newly devised evidence-based smoking cessation service package will be compared with the existing service in a randomized controlled trial within the community setting of Thailand.

METHOD/DESIGN: This randomized control trial will recruit 440 current smokers at CVD risk because of being diabetic and/or hypertensive. Informed, consented participants will be randomly allocated into the new service-package arm and the routine service arm. The study will take place in the non-communicable disease clinics of the Maetha District Hospital, Lampang, northern Thailand. The new smoking-cessation service-package comprises (1) regular patient motivation and coaching from the same primary care nurse over a 3-month period; (2) monthly application of piCO + smokerlyzer to sustain motivation of smoker's quitting attempt and provide
positive feedback over a 3-month period; (3) assistance by an assigned family member; (4) nicotine replacement chewing gum to relieve withdrawal symptoms. This new service will be compared with the traditional routine service comprising the 5A approach in a 1-year follow-up. Participants who consent to participate in the study but refuse to attempt quitting smoking will be allocated to the non-randomized arm, where they will be just followed up and monitored. Primary outcome of the study is smoking cessation rate at 1-year follow-up proven by breath analysis measuring carbon monoxide in parts per million in expired air. Secondary outcomes are smoking cessation rate at the 6-month follow-up, blood pressure and heart rate, CVD risk according to the Framingham general cardiovascular risk score, CVD events and deaths at the 12-month follow-up, and the cost-effectiveness of the health service packages. Intention-to-treat analysis will be followed. Factors influencing smoking cessation will be analyzed by the structure equation model.

**DISCUSSION:** This multicomponent intervention, accessible at primary healthcare clinics, and focusing on the individual as well as the family and social environment, is unique and expected to work effectively.

**TRIAL REGISTRATION:** Current Controlled Trials ISRCTN89315117.

PMID: 24308874 [PubMed - indexed for MEDLINE] PMCID: PMC4028806


**Abstract**

**BACKGROUND:** Vascular mortality is increasing in economically developing countries but reliable data about the determinants of cardiovascular disease are few. The International Collaborative Study of Cardiovascular Disease in Asia (InterASIA) was designed to obtain precise estimates of cardiovascular risk factor levels in the adult population of Thailand.

**DESIGN:** A complex sample survey.

**METHODS:** Data from a structured questionnaire, brief physical examination and a blood sample were collected from 5305 individuals aged 35 years or older (response rate 68%). Mean risk factor levels were calculated for eight groups defined by age and sex in 18 representative urban and rural areas of Thailand. Population risk factor levels were calculated by applying sampling weights derived from the 2000 Thai Census and allowing for the complex sampling design.

**RESULTS:** The estimated mean (standard error) population blood pressure was 120/76 (0.7/0.5) mmHg, mean serum total cholesterol was 5.2 (0.06) mmol/l, mean body mass index was 24 (0.2) kg/m2, mean fasting plasma glucose was 5.6 (0.06) mmol/l, the proportion with diabetes 9.6 (1)% and the proportion of current smokers was 25 (3)% . There were estimated to be 5.1 (0.5) million individuals with high blood pressure, 4.4 (0.4) million with high total cholesterol, 8.9 (0.8) million overweight or obese, 2.4 (0.2) million with diabetes and 6.2 (0.9) million current smokers. Mean levels of all major risk factors, except smoking, were worse in urban compared with rural areas. However, except for total cholesterol, the absolute numbers of individuals with abnormal risk factor levels were highest in rural areas.

**CONCLUSION:** Absolute levels of cardiovascular risk factors in Thailand are high. Effective risk factor control strategies that target both rural and urban areas of Thailand have the potential to avert much premature cardiovascular disease.

PMID:14555679[PubMed - indexed for MEDLINE]

2.2.3. Diabetes


**Abstract**

**OBJECTIVE:** To determine the impact of smoking and quit smoking on mortality rate.
MATERIAL AND METHOD: This prospective cohort was a three-year follow-up of Thai Diabetes Registry project that registered 9,370 diabetic patients from 10 diabetic clinics in tertiary medical centers in Bangkok and major provinces between April 2003 and February 2006.

RESULTS: The groups of 7,487 (80%), 1,315 (14%), and 568 (6%) patients were classified as non-smokers, ex-smokers, and current smokers. The crude death rate of ex-smokers (Hazard Ratio (HR) 1.52 (95% CI 1.19-1.95)) and current smokers (HR 1.55 (1.10-2.19)) were higher than death rate of non-smokers. After control for covariates, the HR comparing ex-smokers with non-smokers was not different (1.10 (0.81-1.50)), while the HR comparing current smokers with non-smokers remained statistical significant (1.74 (1.17-2.61)).

CONCLUSION: Smoking increases mortality rate in diabetic patients by about 74%. Quitting smoking decreased mortality rate to the same rate as of diabetic non-smokers.

PMID: 23539929[PubMed - indexed for MEDLINE]


Abstract

We aimed to determine the risk factors associated with microalbuminuria in type 2 diabetes patients through a systematic review and meta-regression analysis. The analyzed studies were obtained from PubMed, Scopus, British Medical Journal and ProQuest databases. All studies published from 2000 to 2009 were included. The search yielded 1,243 citations, of which 22 studies were analyzed. Pooled odds ratio estimates were obtained using a random effect model. The association of each risk factor with microalbuminuria was examined after adjusting for age and sex using meta-regression analysis. The adjusted odds ratio was 1.26 (95% CI 1.08-1.46) for systolic blood pressure; 1.16 (95% CI 1.03-1.31) for diastolic blood pressure; 1.43 (95% CI 1.14-1.80) for fasting plasma glucose level; 1.37 (95% CI 0.95-1.98) for smoking and 1.49 (95% CI 0.91-2.46) for waist circumference. The risk factors associated with microalbuminuria were found to be poor glycemic control, uncontrolled hypertension, smoking and central obesity. There is an urgent need to launch a health promotion program for changes in individual health behaviors to mitigate these risk factors for microalbuminuria in patients with type 2 diabetes.

PMID:23082596[PubMed - indexed for MEDLINE]


Abstract

INTRODUCTION: The prevalence of type 2 diabetes in Thailand is 9.8 percent which is double the number forecast by World Health Organization. There is inadequate information to statistically represent all Thai diabetic patients for their causes of death.

OBJECTIVE: To determine the clinical characteristics that predicted death and causes of death in Thai diabetic patients.

MATERIAL AND METHOD: This prospective cohort was a 3-year follow-up study of the Thai Diabetes Registry project done between April, 2003, and February, 2006, which registered 9,419 diabetic patients attending 11 diabetic clinics in tertiary medical centers in Bangkok and major provinces of Thailand. The dead or alive status (99.5%) was determined. The causes of death were defined by reviewing the medical records.

RESULTS: Of the 9,370 diabetic patients registered, 425 patients died, 1.84 percent per year. There was an increased risk of death associated with age, type of healthcare plan, lower education, insulin use, smoking, history of coronary artery disease and cerebrovascular disease, serum creatinine and high HbA1c. Lipid-lowering medication and metformin decreased the risk of death. Cardiovascular disease, infection and cancer were the prevalent causes of death.
CONCLUSION: The present study showed risk factors that influenced death and causes of death in Thai diabetics.

PMID:21299087[PubMed - indexed for MEDLINE]

2.2.4. Respiratory


Abstract

PURPOSE: To compare high-resolution computed tomography (HRCT) of lungs with pulmonary function in smokers diagnosed with emphysema.

MATERIAL AND METHOD: The authors retrospectively reviewed 17 patients with a history of smoking and dyspnea, who underwent HRCT of the lungs and pulmonary function testing. HRCT scores were determined and compared to pulmonary function (FEV1, FEV1/FVC, and DLCO).

RESULTS: The HRCT of all 17 patients (17/17; 100%) were typical of centrilobular emphysema; with a mean score of 12.88 +/- 9.18 (range, 4 to 34). Decreased FEV1 (<80% predicted) was found in 8 patients (47%), decreased FEV1/FVC (<70% predicted) in 13 patients (76%) and decreased DLCO (<80% predicted) in 3 patients (18%). The severity of emphysema revealed by HRCT was inversely correlated with the pulmonary function test: DLCO (r=-0.842, p=0.000) and FEV1 (r=-0.597, p=0.011), but not FEV1/FVC (r=-0.400, p=0.112).

CONCLUSION: HRCT allows detection of emphysema in symptomatic smokers even when pulmonary function appears to be normal. The greater the involvement of emphysema revealed by the HRCT, the poorer the pulmonary function. The authors, therefore, conclude that HRCT is the most sensitive modality for diagnosing early emphysema in smokers with dyspnea.

PMID:12924800[PubMed - indexed for MEDLINE]

2.2.5. Other diseases


Abstract

AIM: This study aimed to investigate the effects of cigarette smoking on periodontal conditions in specific tooth regions of older Thai men. METHODS: There were 272 current smokers, 714 former smokers, and 477 non-smokers enrolled in the present study. Differences between groups in the mean probing depth or attachment loss were compared using anova. The relationship between smoking exposure or cessation duration and periodontal conditions was examined using linear trend analysis. RESULTS: Smokers had deeper pockets and attachment loss than non-smokers. The greatest differences between smokers and non-smokers were observed in the maxillary posterior palatal region, where current smokers had 0.88 mm greater attachment loss than non-smokers, compared to 0.36-0.60 mm observed in other tooth regions. Among the current smokers, there was a trend towards an increase in attachment loss with increasing smoking exposure in the maxillary posterior regions. However, it was not statistically significant. Among the former smokers, a better periodontal condition was observed, depending on the length of time since smoking cessation; this was most pronounced in the maxillary posterior palatal region. CONCLUSIONS: The palatal site of maxillary posterior teeth was the area most affected by cigarette smoke. The results suggest a possible local effect of smoking in addition to its systemic effects.

PMID: 22522950 [PubMed - indexed for MEDLINE]

Abstract

BACKGROUND: Periodontitis is a common disease-related reason for tooth extraction. Although several studies have related tobacco smoking to periodontitis among other populations, not many investigations concerning the relationship between tobacco smoking and periodontitis among rural northeastern Thai people have been conducted although tobacco smoking is a common practice among these Thai people.

OBJECTIVE: The present study used two existing data sets to evaluate the association between tobacco smoking and periodontitis among rural Khon Kaen Thai males.

STUDY DESIGN: Cross-sectional analytic study.

MATERIAL AND METHOD: The study populations for phase I and phase II comprised a total of 625 males, aged 30-89 years, residing in five districts of Khon Kaen province, Thailand during 1990-91 and 1,218 males, aged 33-86 years, residing in Chonnabot district, Khon Kaen province, Thailand during 1992-94, respectively. The data were obtained through oral examination and interview. The analyses employed descriptive, bivariate, and multivariable logistic regression.

RESULTS: Findings from final multivariable logistic regression models identified tobacco smoking as a risk indicator for periodontitis in the presence of several factors in the final models including age, gingival bleeding, debris deposits, and missing teeth.

CONCLUSION: It is evident that tobacco smoking is a risk indicator for periodontitis and that tobacco smoking, which is directly associated with periodontitis among these populations, could enhance the possibility of increasing periodontitis and tooth extraction. Therefore, targeted interventions aimed at encouraging people to quit smoking tobacco would help in maintain favorable oral health.

PMID:19938746[PubMed - indexed for MEDLINE]


Abstract

BACKGROUND: Recent data has shown that a great number of Thai adults as well as people worldwide have died from smoking-related diseases. Measurements of exhaled carbon monoxide have been increasingly used to evaluate smoking status and cutoff levels of exhaled carbon monoxide and have been widely reported among other populations but not for the Thai people.

OBJECTIVE: The purpose of the present research was to study the proper cutoff level for exhaled carbon monoxide for detecting smoking status among urban Thai adults residing in Khon Kaen province, Thailand as well as to study the effect of baseline characteristics in modifying the cutoff level of exhaled carbon monoxide.

STUDY DESIGN: Cross-sectional analytic study.

MATERIAL AND METHOD: The present study employed existing data whereby the study subjects comprised a total of 420 Thai adults, aged 15-70 years, residing in urban Khon Kaen province, Thailand during the year 2006. The data was obtained through interview and exhaled carbon monoxide measurement. The analyses employed descriptive, bivariate, and multivariable logistic regression.

RESULTS: Findings from the final multivariable logistic regression model revealed good relation between exhaled carbon monoxide levels and tobacco smoking status. Other variables in the model included age-group and the interaction between exhaled carbon monoxide and age-group. Further analysis showed a greater odds ratio in the older age-group, with the odds ratios (95% CI) being 2.50 (1.87, 3.34) and 1.46 (1.31, 1.63) in the older (41-70 years) and younger (15-40 years) age-groups, respectively. In addition, proper cutoff of exhaled carbon monoxide for the older age-group was suggested as 7 ppm, while 8 ppm was more appropriate for the younger age-group. Based on the findings, a baseline characteristic for age modified cutoff level of carbon monoxide was established

CONCLUSION: Differences in baseline characteristics should be considered in evaluating smoking status when choosing the cutoff level of exhaled carbon monoxide for any population.

PMID:19127787[PubMed - indexed for MEDLINE]

Abstract

BACKGROUND: Tooth loss is an oral health problem affecting Thai people and people of other nations as well. Not much of epidemiologic evidence concerning factors affecting tooth loss among Thai people has been reported although severity of tooth loss among Thai people has never been decreased.

METHODS: This study employed two existing data sets to evaluate the role of health behaviors such as tobacco smoking and betel quid chewing (a common habit prevalent among rural Thai females), together with other factors in relation to tooth loss among rural Thai people. The study population in the first (phase I) and second (phase II) data sets included 1484 and 3471 male and female adults residing in rural areas of Khon Kaen province, Thailand during 1990-1991 and 1992-1994, respectively. The data were obtained through oral examination and interview. Employing descriptive, bivariate, and multivariable Poisson regression, key risk indicators of tooth loss were identified for both data sets.

RESULTS: The findings from final multivariable Poisson regression models were consistent in that tobacco smoking, betel quid chewing, age, dental caries (defined as decayed plus filled teeth) and periodontitis were significantly related to tooth loss among these rural populations.

CONCLUSION: Therefore, preventive programs aiming at discouraging Thai people from smoking tobacco and/or chewing betel quid should be established so that healthy natural teeth can be maintained.

PMID:17005217[PubMed - indexed for MEDLINE]


Abstract

BACKGROUND: Not much research evidence concerning the relationship between betel quid chewing and oral health has been established although betel quid chewing is a common practice among people in many Asian countries including rural areas of Thailand.

OBJECTIVE: The present study employed two existing data sets to evaluate the association between betel quid chewing and oral diseases.

MATERIAL AND METHOD: The study populations for phase I comprised a total of 796 females, aged 30-89 years, residing in five districts of Khon Kaen province, Thailand during 1990-91. In phase II, there were 2,253 females, aged 31-86 years, residing in Chonnabot district, Khon Kaen province, Thailand during 1992-94, respectively. The data were obtained through oral examination and interview. The analyses employed descriptive, bivariate, and multivariable logistic regression.

RESULTS: Findings from final multivariable logistic regression models revealed the inverse relationship between betel quid chewing and dental caries adjusting for other variables. In addition, results from the final multivariable logistic regression models predicting periodontitis showed that betel quid chewing was directly associated with periodontitis in the presence of several confounding factors. The consistent findings from both data sets suggest that although betel quid chewing may reduce dental caries, it was directly related to periodontitis and enhanced the possibility of increasing tooth loss.

CONCLUSION: Therefore, preventive programs aiming at discouraging Thai people from chewing betel quid should be established to preserve favorable oral health.

PMID:16881434[PubMed - indexed for MEDLINE]

Abstract

Smoking has contributed to various neurological, cardiovascular, and pulmonary diseases. According to carcinogens found in cigarette smog, benzene is one of the important carcinogenic compounds. The urinary trans, trans-muconic acid (ttMA) levels among a sample of 10 Thai smokers and 35 Thai non-smokers were investigated, compared and reported. The average urinary ttMA level in smokers and non-smokers were 2.19 +/- 2.32 and 0.24 +/- 0.33 mg/gCr, respectively. A significant higher urinary ttMA level among the smokers was observed (P < 0.05). Since the higher urinary ttMA indicates the higher occult risk for cancer, the usage of urinary ttMA is recommended as a monitoring tool to follow up benzene exposure in the smokers.

PMID:15878497[PubMed - indexed for MEDLINE]


Abstract

BACKGROUND: The aim of this study is to determine the effect of cigarette smoking on the severity of periodontitis in a cross-sectional study of older Thai adults.

METHODS: The study population consisted of 1,960 subjects (age 50 to 73 years old). All subjects received both medical and dental examinations. Periodontal examinations, including plaque score, probing depth, and clinical attachment level, were done on all teeth present in two diagonal quadrants. Sociodemographic characteristics and smoking status were obtained by questionnaires. Multinomial logistic regression was used to address the association between cigarette consumption and mean clinical attachment level.

RESULTS: In this study population, 48.7% were non-smokers, 14.4% were current smokers, and 36.9% were former smokers. Current smokers had higher percentage of sites with plaque, deeper mean probing depth, and greater mean clinical attachment level than former smokers and non-smokers. The odds of having moderate and severe periodontitis for current smokers were 1.7 and 4.8 times greater than non-smokers, respectively. Former smokers were 1.8 times more likely than non-smokers to have severe periodontitis. Quitting smoking reduced the odds of having periodontitis. For light smokers (<15 packyear), the odds for severe periodontitis reverted to the level of non-smokers when they had quit smoking for > or =10 years. For moderate and heavy smokers (> or =15 packyear), the odds of having severe periodontitis did not differ from those of non-smokers when they had quit smoking for > or =20 years.

CONCLUSIONS: There was a strong association between cigarette smoking and the risk of periodontitis among older Thai adults. Quitting smoking appears to be beneficial to periodontal health.

PMID:15857097[PubMed - indexed for MEDLINE]

3. Tobacco control interventions (including policies, legislations and taxation)


Abstract

BACKGROUND: Telephone-based smoking cessation services (quitlines) offering counselling for smoking cessation without nicotine replacement therapy may be important components of tobacco control efforts in low and middle income countries, but evaluations in such resource-limited settings are lacking. We aimed to evaluate the usage, effectiveness and cost of the Thailand National Quitline (TNQ).

METHODS: Analysis of retrospective data for callers to the TNQ between 2009 and 2012 and a follow-up survey in 1161 randomly selected callers. RESULTS: Between 2009 and 2012 there were 116 862 callers to the TNQ; 36 927 received counselling and at least one follow-up call. Compared with smokers in the general population, callers were younger, more highly educated, more likely to be students, and more likely to smoke cigarettes rather than roll-your-own tobacco. Continuous abstinence rates at 1, 3 and 6 months after calling were 49.9%, 38.0% and 33.1%. The predicted rate at 12 months was 19.54% (95% CI 14.55 to 26.24). Average cost per completed counselling was $31 and the average cost per quitter was $253. Assuming all (and two-thirds) TNQ callers who succeed in quitting would have failed to quit without the assistance of the TNQ, cumulative life years saved (LYS) for the 4-year period were 57 238 (36 733) giving a cost per LYS of $32 (50) (about 7.93 LYS per quitter) and an estimated return on investment over 4 years of 9.01 (5.78).
CONCLUSIONS: A low-cost quitline without nicotine replacement therapy is a promising model for smoking cessation services and likely to offer good value for money in Thailand.

PMID: 24920575 [PubMed - as supplied by publisher]


Abstract

Alkaloid molecules can act, depending on a type of amine functionality present in alkaloids, as either hydrogen acceptor or hydrogen-donor for hydrogen bonding that is critically important for the interaction (binding) between targets (enzymes, proteins and receptors) and drugs (ligands). Because of this unique property, alkaloid scaffolds are therefore present in several drugs and lead compounds. This review highlights alkaloid scaffolds in drugs, particularly those recently approved in 2012; it also covers the scaffolds in leads and drug candidates which are in clinical trials and preclinical pipeline. The review focuses on three therapeutic areas including treatments of cancer, tuberculosis, and tobacco cessation. Alkaloid scaffolds in drugs and leads are inspired by those of naturally occurring alkaloids, and these scaffolds include pyridine, piperidine, quinoline, quinolinolone, quinazoline, isoquinoline, indole, indololone, isoindole, isoxazole, imidazole, indazole, thiazole, pyrazole, oxazolidinone, oxadiazole, and benzazepine. In addition to medicinal chemistry aspects, natural products possessing an individual alkaloid scaffold, as well as the mechanism of action of drugs and leads, are also discussed in this review.

PMID: 24359196 [PubMed - indexed for MEDLINE]


Abstract

BACKGROUND: Smoking cessation is a high-priority intervention to prevent CVD events and deaths in developing countries. While several interventions to stop smoking have been proved successful, the question of how to increase their effectiveness and practicality in developing countries remains. In this study, a newly devised evidence-based smoking cessation service package will be compared with the existing service in a randomized controlled trial within the community setting of Thailand.

METHOD/DESIGN: This randomized control trial will recruit 440 current smokers at CVD risk because of being diabetic and/or hypertensive. Informed, consented participants will be randomly allocated into the new service-package arm and the routine service arm. The study will take place in the non-communicable disease clinics of the Maetha District Hospital, Lampang, northern Thailand. The new smoking-cessation service-package comprises (1) regular patient motivation and coaching from the same primary care nurse over a 3-month period; (2) monthly application of pCO + smokerflyzer to sustain motivation of smoker’s quitting attempt and provide positive feedback over a 3-month period; (3) assistance by an assigned family member; (4) nicotine replacement chewing gum to relieve withdrawal symptoms. This new service will be compared with the traditional routine service comprising the 5A approach in a 1-year follow-up. Participants who consent to participate in the study but refuse to attempt quitting smoking will be allocated to the non-randomized arm, where they will be just followed up and monitored. Primary outcome of the study is smoking cessation rate at 1-year follow-up proven by breath analysis measuring carbon monoxide in parts per million in expired air. Secondary outcomes are smoking cessation rate at the 6-month follow-up, blood pressure and heart rate, CVD risk according to the Framingham general cardiovascular risk score, CVD events and deaths at the 12-month follow-up, and the cost-effectiveness of the health service packages. Intention-to-treat analysis will be followed. Factors influencing smoking cessation will be analyzed by the structure equation model.

DISCUSSION: This multicomponent intervention, accessible at primary healthcare clinics, and focusing on the individual as well as the family and social environment, is unique and expected to work effectively.

TRIAL REGISTRATION: Current Controlled Trials ISRCTN89315117.

PMID: 24308874 [PubMed - indexed for MEDLINE] PMCID: PMC4028806

Abstract

BACKGROUND: Treatment for tobacco dependence is not available in many low-resource settings, especially in developing countries.

PURPOSE: To test the impact of a novel mix of monetary and social incentives on smoking abstinence in rural communities of Thailand.

DESIGN: An RCT of commitment contracts and team incentives for rural smokers to quit smoking. Smokers were not blinded to treatment status, although the assessor of the biochemical urine test was.

SETTING/PARTICIPANTS: All adult smokers living in the study area were eligible to participate; 215 adult smokers from 42 villages in Nakhon Nayok province, Thailand, participated. Fourteen smokers who lacked teammates were dropped. INTERVENTION: A total of 201 smokers were assigned to a two-person team, and then randomly assigned by team (in a 2:1 ratio) with computer-generated random numbers to receive smoking-cessation counseling (control group) or counseling plus offer of a commitment contract, team incentives, and text message reminders for smoking cessation at 3 months (intervention group).

MAIN OUTCOME MEASURES: The primary outcome was biochemically verified 7-day abstinence at 6 months, assessed on an intention-to-treat basis. Secondary outcomes include study participation, biochemically verified abstinence at 3 months, self-reported abstinence at 14 months, and the incremental cost per quitter of the intervention, nicotine gum, and varenicline in Thailand. Data were collected in 2010-2011 and analyzed in 2012.

RESULTS: The trial enrolled 215 (10.5%) of 2055 smokers. The abstinence rate was 46.2% (61/132) in the intervention group and 14.5% (10/69) in the control group (adjusted OR 7.5 [3.0-18.6]) at 3 months; 44.3% (58/131) and 18.8% (13/69) at the primary end point of 6 months (adjusted OR 4.2 [1.8-9.7]); and 42.0% (55/131) and 24.6% (17/69) at 14 months (adjusted OR 2.2 [1.0-4.8]). The purchasing power parity-adjusted incremental cost per quitter from the intervention is $281 (95% CI=$187, $562), less than for nicotine gum ($1780, 95% CI=$1414, $2401) or varenicline ($2073, 95% CI=$1357, $4388) in Thailand. CONCLUSIONS: The intervention enhanced abstinence by 91%-136% at 6 months, relative to the control group, although self-reports at 14 months suggest tapering of the treatment effect. The intervention may offer a viable, cost-effective alternative to current smoking-cessation approaches in low-resource settings.

TRIAL REGISTRATION: This study is registered at ClinicalTrials.gov NCT01311115.

PMID: 24139765 [PubMed - indexed for MEDLINE] PMCID: PMC3806235


Abstract

In addition to quitting and cutting consumption, smokers faced with higher cigarette prices may compensate in several ways that mute the health impact of cigarette taxes. This study examines three price avoidance strategies among adult male smokers in Thailand: trading down to a lower-priced brand, buying individual sticks of cigarettes instead of packs, and substituting roll-your-own tobacco for factory-manufactured cigarettes. Using two panels of micro level data from the International Tobacco Control Southeast Asia Study, collected in 2005 and 2006, we estimate the effects of a substantial excise tax increase implemented throughout Thailand in December 2005. We present estimates of the marginal effects and price elasticities for each of five consumer behaviors. We find that, controlling for baseline smoking characteristics, socio demographics, and policy variables, quitting is highly sensitive to changes in cigarette prices, but so are brand choice, stick-buying, and use of roll-your-own tobacco. Neglecting such strategic responses leads to overestimates of a sin tax's health impact, and neglecting product substitution distorts estimates of the price elasticity of cigarette demand. We discuss the implications for consumer welfare and several policies that mitigate the adverse impact of consumer responses.

PMID: 24677731[PubMed - as supplied by publisher] PMCID: PMC3989462

Abstract

BACKGROUND: Despite availability of several therapeutic options for smoking cessation, their usages are limited due to high cost and adverse effect profiles. Recently, more attention has been paid to investigating herbals for smoking cessation. OBJECTIVES: To review relevant evidences on the efficacy and safety of herbals for smoking cessation.

METHODS: We searched clinical studies evaluating herbals use for smoking cessation from Medline, EMBASE, CINAHL, Cochrane CENTRAL, PsychINFO, AMED, WHO Trial registry, Thai dissertation database, and other databases from its inception to October 2012. Studies are restricted to only English or Thai.

RESULTS: A total of 7 studies met inclusion criteria; 6 studies were randomized trial (RCT) evaluating variety of herbals. Three RCTs evaluated oral St. John’s wort (SJW) extract (N=289), 2 RCTs evaluated oral mix-herbal tea (N=164), and 1 RCT evaluated inhaled aromatic black pepper (N=48). The other study was a non-randomized controlled trial evaluating oral SJW extract among 24 smokers. All interventions were given in a range of 1 week before starting the trial and continued up to 14 weeks. Smoking cessation was measured with various methods including the number of cigarettes per day, abstinence rate, expired CO level, and urine cotinine level. Follow-up duration ranged from 3-h session to 6-months period. Evidences of SJW indicated low percentage in abstinence rate for smoking and its effectiveness was not significantly different from placebo. Studies of mix herbal tea showed a statistically significant effectiveness, compared to placebo, in reducing the number of cigarettes per day, craving scale, and total withdrawal scale but not urinary cotinine excretion. Essential oil of black pepper with a hollow plastic tube significantly reduced craving at 3-h session.

CONCLUSION: Evidence supporting the role of complementary medicines as an anti-smoking is limited. Further research in this field would benefit from the standardization of herbals products to implement on standard interventions and outcome measurement for smoking cessation.

PMID: 24050594 [PubMed - indexed for MEDLINE]


Abstract

The tobacco epidemic is an increasing threat to public health with the tobacco burden particularly high in WHO's South-East Asia Region (SEAR). The Region has many obstacles to tobacco control, but despite these challenges, significant progress has been made in many countries. Although much work still needs to be done, SEAR countries have nevertheless implemented strong and often innovative tobacco control measures that can be classified as “best practices,” with some setting global precedents. The best practice measures implemented in SEAR include bans on gutka, reducing tobacco imagery in movies, and warning about the dangers of tobacco. In a time of scarce resources, countries in SEAR and elsewhere must ensure that the most effective and cost-efficient measures are implemented. It is hoped that countries can learn from these examples and as appropriate, adapt these measures to their own specific cultural, social and political realities.

PMID: 23442393 [PubMed - indexed for MEDLINE]


Abstract

OBJECTIVE: To determine the efficacy of fresh lime as a smoking cessation aid compared with nicotine gum.

MATERIAL AND METHOD: A randomized, controlled trial was conducted between March 2009 and September 2009. Only regular smokers aged 18 or older who were willing to quit were randomized to receive either fresh lime (n = 47) or nicotine gum (n = 53). Smokers were excluded if they were using other smoking cessation aids, allergic to citrus, or had dental problems. Exhaled carbon monoxide (CO)-confirmed continuous abstinence rate...
(CAR) during week 9-12 was measured as the primary outcomes. To grade the severity of craving, a 100-mm visual analogue scale (VAS) was used. RESULTS: There was no significant difference in CO-confirmed CAR between the fresh lime group and the nicotine gum group during weeks 9-12 (61.7% vs. 66.0%; p = 0.65), although 7-day point prevalence abstinence at week 4 of the fresh lime users was statistically significant lower than those using nicotine gum (38.3% vs. 58.5%; p = 0.04). Cravings did not differ significantly between the groups, although fresh lime users tend to report more cravings intensity.

CONCLUSION: Fresh lime can be used effectively as a smoking cessation aid, although not as good as nicotine gum in reducing cravings.

PMID: 23513469 [PubMed - indexed for MEDLINE]


Abstract

We evaluated a smoking cessation program based on an ecological model among Royal Thai Army conscripts with three levels of behavioral change intervention: intrapersonal level, interpersonal level and organizational level. The program applied processes of change in the Transtheoretical Model for intervention at the intrapersonal level; social support from the family at the interpersonal level; strengthening policies and activities to support quitting, including providing a smoke-free workplace at the organizational level. Eighty-nine participants were purposively selected from the first regiment of conscripts at the King's Royal Guard, recruited into the Army in 2009. The behavioral change intervention was conducted during their first six months of duty. A self-administered questionnaire was used to collect data between May and November 2009. Individual interviews and checklist observations were employed to collect data. Data was analyzed using inferential statistics, comparing means by paired t-test and the chi-square test was used to analyze correlations. Qualitative data were analyzed thematically. Sixty-three percent of participants significantly (p<0.001) reduced the number of cigarettes smoked, and 4.5% quit smoking. There was significant improvement in self-efficacy for improving smoking behavior (p=0.002) and making an effort to quit (p<0.001).

PMID: 23077826 [PubMed - indexed for MEDLINE]


Abstract

Transnational tobacco companies (TTCs) interfere regularly in policymaking in low- and middle-income countries (LMICs). The WHO Framework Convention for Tobacco Control provides mechanisms and guidance for dealing with TTC interference, but many countries still face 'how to' challenges of implementation. For more than two decades, Thailand's public health community has been developing a system for identifying and counteracting strategies TTCs use to derail, delay and undermine tobacco control policymaking. Consequently, Thailand has already implemented most of the FCTC guidelines for counteracting TTC interference. In this study, our aims are to describe strategies TTCs have used in Thailand to interfere in policymaking, and to examine how the public health community in Thailand has counteracted TTC interference. We analyzed information reported by three groups with a stake in tobacco control policies: Thai tobacco control advocates, TTCs, and international tobacco control experts. To identify TTC viewpoints and strategies, we also extracted information from internal tobacco industry documents. We synthesized these data and identified six core strategies TTCs use to interfere in tobacco control policymaking; (1) doing business with 'two faces', (2) seeking to influence people in high places, (3) 'buying' advocates in grassroots organizations, (4) putting up a deceptive front, (5) intimidation, and (6) undermining controls on tobacco advertising, promotion and sponsorship. We present three case examples showing where TTCs have employed multiple interference strategies simultaneously, and showing how Thai tobacco control advocates have successfully counteracted those strategies by: (1) conducting vigilant surveillance, (2) excluding tobacco companies from policymaking, (3) restricting tobacco company sales, (4) sustaining pressure, and (5) dedicating resources to the effective enforcement of regulations. Policy implications
from this study are that tobacco control advocates in LMICs may be able to develop countermeasures similar to those we identified in Thailand based on FCTC guidelines to limit TTC interference.

PMID: 22690186 [PubMed - indexed for MEDLINE] PMCID: PMC3366603


Abstract

In Thailand, the prevalence of smoking has steadily declined over the past 20 years, suggesting an effective tobacco control policy. However, the prevalence has recently stabilised and youth smoking now appears to be on the rise. Tobacco use is the third highest risk factor contributing to the burden of disease in the country. This is an issue of concern and led to the present review of tobacco control measures in Thailand. The present evidence-based review shows that Thailand's tobacco control measures are relatively strong and comply well with the WHO Framework Convention on Tobacco Control in terms of taxation, advertising through popular media, and warning labels on cigarettes and other tobacco product packages. However, challenges remain in dealing with highly prevalent roll-your-own cigarettes, strict prohibition of tobacco sale to underage youths, household smoking, illicit trade of tobacco products, viable tobacco crop diversification for domestic tobacco growers and liability. If these challenges are met, the prevalence of tobacco consumption could possibly be further reduced.

PMID: 21791510 [PubMed - indexed for MEDLINE]}


Abstract

INTRODUCTION: In low- and middle-income countries (LMICs) over the past two decades locally relevant tobacco control research has been scant. Experience shows that tobacco control measures should be based on sound research findings to ensure that measures are appropriate for local conditions and that they are likely to have an impact. Research should also be integrated within tobacco control measures to ensure ongoing learning and the production of knowledge. Thailand, a middle-income country, has a public health community with a record of successful tobacco control and a longstanding commitment to research. Thailand's comprehensive approach includes taxation; bans on tobacco advertising, sponsorship and promotion; smoke-free areas; graphic cigarette pack warnings; social marketing campaigns; cessation counseling; and an established tobacco control research program. The purpose of this study was to document and analyze the development of tobacco control research capacity in Thailand and the impact of research on Thai tobacco control measures.

METHOD: We used mixed methods including review of historical documentation and policy reports, qualitative interviews with key members of Thailand's tobacco control community, and an analysis of research productivity.

FINDINGS: In Thailand, tobacco control research has evolved through three phases: (1) discovery of the value of research in the policymaking arena, (2) development of a structure to support research capacity building through international collaborations supported by foreign funding agencies, and (3) delivery of locally relevant research made possible largely through substantial stable funding from a domestic health promotion foundation. Over two decades, Thai tobacco control advocates have constructed five steppingstones to success: (1) adapting foreign research to inform policymaking and lobbying for more support for domestic research; (2) attracting foreign funding agencies to support small-scale research and capacity building; (3) participating in multi-country research and capacity building programs; (4) using collaborative experiences to demonstrate the need for domestic support of locally relevant research; and (5) maintaining an unwavering commitment to research while being vigilant to ensure continued research support.

CONCLUSION: The evolution of tobacco control research in Thailand provides examples of steppingstones that LMICs may be able to use to construct their own tobacco control research pathways.

PMID: 22284811 [PubMed - indexed for MEDLINE] PMCID: PMC3305371
Summary

This Regional Strategy for Tobacco Control primarily provides a longer-term strategic guidance to Member States of the South-East Asia Region to support them in formulating evidence-based policies and designing a sustained and cost-effective programme on tobacco control to counter successfully the rising public health concerns of tobacco use in the Region. The Region is home to around 250 million smokers and nearly the same number of smokeless tobacco users. About 1.3 million deaths occur every year, including around 160 000 deaths due to exposure to second-hand smoke. The increasing trend of tobacco use and its devastating effects pose a grave threat to the health and well-being of the people of the Region. Thus, the implementation of the Regional Strategy is expected to eventually protect the people of the Region from the enormous negative health, social, economic and environmental consequences of tobacco consumption and exposure to tobacco smoke.


Abstract

This review of legislation, obstacles faced, and challenges to be met, outlines present tobacco control lessons learnt in Thailand. A review of over twenty years of tobacco control experience in Thailand is provided in seven areas including policy formulation and the role of civil society, as well as in essential WHO Framework Convention on Tobacco Control areas. A descriptive, historical review shows how stakeholders, policies and resources were mobilized in Thailand, and what lessons resource-challenged countries might use from the Thai experience.

PMID:22089691 [PubMed - indexed for MEDLINE]


Summary

In its efforts to control tobacco use, Thailand has used taxation as a price measure and increased excise tax rates significantly over time. Since consumption depends on the retail price of cigarettes and other tobacco products, and variables such as income of consumers, the policy needs to address the whole tobacco taxation system rather than the tax rates only. The report suggests that a mechanism to raise the prices of cigarettes at a rate high than the inflation along with appropriate taxation on other tobacco products (roll your own cigarettes) will make the taxation system more effective for tobacco control.

World Health Organization, Regional Office for South-East Asia. Profile on implementation of WHO framework convention on tobacco control in the South-East Asia Region: Tobacco Kit. New Delhi: WHO SEARO; 2011.

Summary

This profile on the implementation of the WHO Framework Convention on Tobacco Control in the South-East Asia Region provides an overview of the status of the implementation of the convention in the eleven Member States of the SEA Region. It highlights some major milestones achieved as well as the challenges faced while implementing tobacco control measures in Member countries.

Summary

Smokeless tobacco consumption in the South-East Asia Region is a growing threat to health. The region is a hub for smokeless tobacco production and use. This category of tobacco product is manufactured in various forms. The diversity of these tobacco products, their availability and affordability make them obvious alternatives to the relatively more expensive cigarettes. However, the dangers and risks associated with smokeless tobacco are not well understood by the population. Smokeless tobacco is not perceived as an urgent threat in many of the Member countries and consequently, tobacco control efforts for this type of tobacco use are not intense. The tobacco control agenda needs to keep up the pressure and apply a wider approach and holistic strategies to address this issue. To this end, the "Expert Group Meeting on Smokeless Tobacco Control and Cessation" was convened in New Delhi, India, on 16-17 August 2011. The meeting allowed experts to share information, identify the next steps on smokeless tobacco control and cessation, and provide inputs to a policy paper to be published later. This report compiles the issues faced by Member States concerning smokeless tobacco and provides recommendations to policy-makers and stakeholders.


Abstract

BACKGROUND: The best way to protect non-smokers' health is to provide a smoke-free environment. Hospitals should be 100% smoke-free for the health of all patients and personnel.

OBJECTIVE: To evaluate the 100% smoke-free hospital development plan for 2007-2009.

MATERIAL AND METHOD: The present study conducted a cross-sectional, descriptive research from May to September 2009. Questionnaires on the 100% smoke-free hospital policy implementation were distributed to 1,040 hospitals, surveying the operational policy, environmental aspect, community activities, cessation service, and research aspects. RESULTS: During 5-month period, 676 out of 1,040 distributed questionnaires were answered, representing 1,159 Thai hospitals at 95 +/- 3% confidence level. 86.4% of Thai hospitals became 100% smoke-free with announced local smoking policy, smoking cessation program, put up smoking free policy signs, organized smoking related activities, organized the global non-smoking day activities, set up smoking cessation clinic in the hospital, and encouraged staff to quit smoking. Out of 12 aspects, only four are implemented in less than 80% of the hospitals, setting up the working team, identifying smokers among patients, fining smokers in the hospitals, and researching. In order to be a 100% smoke-free hospital, both the staffs and inpatients must strictly refrain from smoking. Smoking staff were also encouraged to quit smoking in 95.7% of the hospitals. However only 53.4% of the Thai hospitals provided smoking cessation service to inpatients.

CONCLUSION: 86.4% of Thai hospitals have become 100% smoke-free. For more effective hospital operation, TPAAT should set the standard for 100% smoke-free hospitals, presenting the Best Practice hospital, setting protocol in smoking cessation, protocol of fining smokers in the hospitals, and arranging academic conferences.

PMID: 20649067 [PubMed - indexed for MEDLINE]


Abstract

This study examined support for and reported compliance with smoke-free policy in air-conditioned restaurants and other similar places among adult smokers in Malaysia and Thailand. Baseline data (early 2005) from the International Tobacco Control Southeast Asia Survey (ITC-SEA), conducted face-to-face in Malaysia and Thailand (n = 4005), were used. Among those attending venues, reported total smoking bans in indoor air-conditioned places such as restaurants, coffee shops, and karaoke lounges were 40% and 57% in Malaysia and Thailand, respectively. Support for a total ban in air-conditioned venues was high and similar for both countries (82% Malaysian and 90% Thai smokers who believed there was a total ban), but self-reported compliance with bans in such venues was significantly higher in Thailand than in Malaysia (95% vs 51%, P < .001). As expected, reporting a ban in air-conditioned venues was associated with a greater support for a ban in such venues in both countries.

PMID: 20032039 [PubMed - indexed for MEDLINE]
Summary

Tobacco Cessation: A Manual for Nurses, Health Workers and other Health Professionals is a comprehensive manual on tobacco cessation. It provides a detailed overview of the extent and patterns of use of tobacco products in the South-East Asia (SEA) Region and the related health burden. Among the top 10 countries globally with the highest levels of tobacco use among males, as many as three are from the SEA Region. The Manual highlights the need to provide tobacco cessation interventions by nurses, health workers and other health professionals, and graphically depicts the adverse health effects of tobacco on almost all organs of the human body. In the section on interventions, the Manual reiterates that tobacco cessation efforts start with the successful identification of tobacco use. It provides effective tools and techniques for tobacco cessation interventions, including visits and follow-up of patients, listing of pros and cons, worksheets, group-based interventions and pharmacotherapy. Apart from the usual methods of cessation such as tapering off and abrupt cessation (‘cold turkey’), the Manual also lists new and innovative interventions such as the ‘Recovery Calendar’. Above all, the Manual highlights the importance of recognizing the dangerous effects of tobacco use, the benefits of quitting and the need to provide effective follow-up to prevent ‘lapse’ and ‘relapse’. It includes a series of succinct, ready-to-use methods, counselling techniques and model motivational tools that can be practiced by the health professional to promote tobacco cessation.

Summary

Helping People Quit Tobacco: A Manual for Doctors and Dentists is a comprehensive dossier on tobacco cessation with the help of intervention from doctors and dentists. The document begins with the premise that the core responsibility of any doctor or dentist includes reducing the use of tobacco among his patients and in the community, and encouraging tobacco cessation. The importance of the TEACH tool to meet the MPOWER goals of the World Health Organization are also enunciated. The Manual cites relevant statistics from the apex global tobacco surveys to highlight the extent and enormity of the tobacco epidemic in the South-East Asia Region, and also outlines the nature of harm caused by tobacco use, its inherent links with several debilitating diseases and the manifold risks of using smoking and smokeless tobacco products. The Manual encourages doctors and dentists to identify at the earliest possible stage tobacco use in a patient, and provides step-by-step guidelines on intervention and assisted cessation through counselling, motivational tools and medication or pharmacotherapy. A concluding section provides details on 'lapse' and 'relapse' and how to overcome the same.


Abstract

OBJECTIVE: To assess the impact of excise tax increase on smoking behavior of daily smokers aged 15 years and over and to explore the association between smokers’ characteristics and smoking behavior prior and after excise tax increase.

MATERIAL AND METHOD: This cross-sectional survey was performed in 504 daily smokers, who were selected from data records of Global Adult Tobacco Survey (GATS) between February and April, 2009. The data were collected by telephone interview in the first and second weeks of July, 2009. Data were analyzed by frequency distribution and binary logistic regression.

RESULTS: After the cigarette tax increase, 9.7% of daily smokers quitted smoking and 48.0% reduced the amount of cigarettes and/or changed the brands and types of tobacco, from manufactured cigarettes to hand-rolled cigarettes. After other covariance being adjusted, the analysis revealed that the amount of cigarettes per day, the types of cigarettes (manufactured and hand-rolled cigarettes), and the smokers’ reaction towards the increased price after the excise tax increase were respectively associated with the fact that the smokers quitted smoking or reduced the amount of cigarettes (p < 0.05).

CONCLUSION: Cigarette tax increase is beneficial for government revenue and it also affects smoking behavior change of daily smokers. However Ministry of Public Health should co-operate with Ministry of Finance to raise...
the tax rate on both cigarettes and hand-rolled cigarettes continuously and provide sufficient cessation service to respond to the need to quit smoking.

PMID: 20232561 [PubMed - indexed for MEDLINE]


Abstract

A wide range of cigarette prices can undermine the impact of tobacco tax policy when smokers switch to cheaper cigarettes instead of quitting. In order to better understand this behaviour, we study socio-economic determinants of price/brand choices in two different markets: a semi-monopolistic market in Thailand and a competitive market in Malaysia. The hypothesis that the factors affecting the price/brand choice are different in these two markets is analysed by employing a 2005 survey among smokers. This survey provides a unique perspective on market characteristics usually described only in business reports by the tobacco industry. We found that smokers in Thailand have fewer opportunities to trade down to save money on cigarettes, but pay lower prices than smokers in Malaysia, despite Thailand's higher tax rate. The Malaysian market, on the other hand, offers many possibilities to shop around for cheaper cigarettes. Higher income and education increase the price paid per cigarette in both countries, but the impact of these factors is larger in Malaysia. This has implications for sensitivity to cigarette prices. Using tax policy alone should be a more effective tobacco control measure in Thailand as compared to Malaysia. The effectiveness of a tax increase in Malaysia can be improved by adding programmes focusing on smoking cessation among low-income/low-educated smokers.

PMID: 19548160 [PubMed - indexed for MEDLINE]

World Health Organization, Regional Office for South-East Asia **Brief profile on tobacco health warnings in the South-East Asia Region.** New Delhi: WHO, SEARO; 2009. http://www.searo.who.int/tobacco/data/en/


Summary

Reducing the use of tobacco is a complex task as it involves enormous socio-cultural and health dimensions. It requires a multi-sectoral and integrated approach that includes consistent and continuous communication for behavioural and social change. Communication as such, is a strategic process to influence individual and group behaviour that needs systematic planning and implementation. This document tends to define the framework and the key elements of communication for tobacco control to be used in the Member States of the South-East Asia Region. It focuses on the major approaches of communication and guiding principles for planning and using the communication components for designing the effective communication for tobacco control programme. It suggests a model for communication planning based on communication objectives, target groups and potential barriers which determines the communication approach, message development and selection of media. It emphasizes on the importance of using media mix, partnership, capacity building and regular evaluation of communication activities.
Summary
Since 2007 the Bloomberg Global Initiative to Reduce Tobacco Use (BGI) is being implemented in the South-East Asia Region. Four countries from the Region - Bangladesh, India, Indonesia and Thailand - were selected as priority countries under the Initiative. In 2007 both human and financial support was provided to these countries to strengthen their capacity for tobacco control. The WHO South-East Asia Region was the first and only Region to have organized an orientation workshop for all BGI staff. The workshop was found to be useful for the implementation of the Initiative in the Region. It has also enhanced the knowledge and team spirit of the whole BGI team and provided a unique opportunity to discuss and share the challenges that the Initiative is facing in terms of coordination for effective implementation. The workshop provided the platform to discuss and decide on a common approach to take the Initiative to its logical fruition.

Summary
Smoking and exposure to second-hand smoke (SHS) are major contributors to the chronic disease burden in the South-East Asia Region. Due to weak tobacco control measures, especially inadequate measures in the area of SHS, a very large population in the Region is exposed to SHS. The regional profile on Smoke-free Environments depicts the situation with respect to exposure to SHS in the Region. It also describes briefly the existing measures in the Region for protecting people from SHS exposure. Making environments completely smoke-free is the most effective way to protect the population from exposure to SHS everywhere, including public places and workplaces. This can only be done by developing and strengthening smoke-free policies and legislation, and enforcing the same.


Abstract
This paper illustrates case studies of four developing countries and compares them as to relative advancement in tobacco control as prescribed by the Framework Convention on Tobacco Control. Tobacco-control efforts first seem to involve assessment of tobacco use prevalence and passage of tobacco-control legislation (e.g., warning labels). Tanzania, Nepal, and China serve as examples. Eventually, an integrated tobacco-control stance that demonstrates several cycles of tobacco-control activities occurs, as is shown in Thailand. Through these case studies, one can achieve a sense of the direction of progress in tobacco control in developing countries.

PMID: 17978974 [PubMed - indexed for MEDLINE]

Summary
This Manual is designed for teachers who work with 13-15-year-old students in Member countries of the World Health Organization (WHO)'s South-East Asia (SEA) Region. The Manual uses skill-based health education through curricular and co-curricular activities. Skill-based health education is designed to help students acquire the knowledge, attitude and skills that are needed to make informed choices and decisions, understand the consequences of tobacco use and tobacco advertising, adopt and practice healthy behaviours to avoid risks and create conditions that are conducive to health. This approach also empowers students to contribute to the creation of tobacco-free environment in which they learn and live. The Manual provides young people with an opportunity to participate in an environmental approach to tobacco control. The decision that young people make about tobacco use are heavily influenced by the physical, social, economic and legal environments in which they live. The activities in the Manual represent a departure from the traditional approach of simply educating students...
not to use tobacco, which is often considered an ineffective strategy. The progressive vision helps young people move beyond a reliance on awareness education to embrace a comprehensive and science-based approach. The focus in the Manual is on what young people can do to create tobacco-free norms and environments and to thwart manipulative efforts of the tobacco industry to create tobacco addictions. The Manual includes classroom activities which a school can adopt either in the form of a regular or optional curriculum. It uses a series of activities which can be carried out as interactive/participatory activities in classrooms (curricular), or as field activities in the community (co-curricular activities). A participatory approach gives students the opportunity to observe and actively practice skills, thus being engaged in "learning by doing." In order to make these activities interactive, the class is split into small working groups and discussions are held in bigger groups based on inputs from the smaller groups. Schools that would use this Manual may adopt a similar pattern or can modify it according to their situations and needs. Teaching posters, handouts, worksheets, and answer sheets, are provided in this Manual to be used in any combination by the teacher or simply as a guide for teaching. Additionally, clippings from newspapers, a few sets of graph paper, pencils, a black board, and chalk may be used as supplementary materials by the teacher.


Summary

As part of the General Obligations under Article 5 of the WHO Framework Convention on Tobacco Control (FCTC), each Party shall develop, implement and periodically update and review multisectoral national tobacco control strategies, plans of action and programmes in order to fully comply with the provisions of the Convention. In order to provide some general guidelines on how to develop these strategies and plans of action, the Regional Strategy for Tobacco Control and Regional Plan of Action for Tobacco Control were developed by the Regional Office. The Regional Strategy contains the vision and strategic plan for tobacco control in the WHO South-East Asia Region for the next five years (2006-2010). The Plan of Action was based on the Regional Strategy for Tobacco Control (2006-2010). While the Convention provides guidelines to reduce the harm from tobacco, definitive actions to control tobacco have to take place at the country level. The successful implementation of the FCTC provisions depends almost entirely on the ability of the countries. Some countries in the Region have already developed their national strategies and plans of action and others are in the process of doing so. These two documents would be helpful in revising the existing national strategies and plans of action in countries that have already developed the same to make them fully compatible with the WHO FCTC. The documents would also be helpful developing national strategies and plans of action by countries which have not yet done so.


Summary

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No abstract available


Summary

The manual is intended primarily for people who work in a health facility serving a 'local' population. A doctor or nurse or someone else in the health facility can use the guidelines to create changes in the communities served by them. But people outside the medical or health professions too can use these guidelines effectively. The interventions (except sections in chapter 8 on 'cessation') can be implemented by any concerned individual, and do not require special medical expertise. The manual can be used for self-instruction or for training. The activities suggested are for implementation at the level of local communities, not at national level. So the emphasis is on action relevant to a community or a clinic.


4. Tobacco Promotion: Advertising and sponsorship


Abstract

According to the 2012 Report of the U.S. Surgeon General, exposure to tobacco advertising, promotion, and sponsorship (TAPS) is associated with the initiation and continuation of smoking among young persons. The World Health Organization (WHO) Framework Convention on Tobacco Control (FCTC) requires countries to prohibit all forms of TAPS; the United States signed the agreement in 2004, but the action has not yet been ratified. Many countries have adopted partial bans covering direct advertising in traditional media channels; however, few countries (including Thailand) have adopted comprehensive bans on all types of direct and indirect marketing. To assess progress toward elimination of TAPS and the level of awareness of TAPS among persons aged ≥15 years, CDC used data from the Global Adult Tobacco Survey (GATS) collected in 14 countries during 2008-2010. Awareness of any TAPS ranged from 12.4% in Turkey to 70.4% in the Philippines. In the four countries where awareness of TAPS was ≤15%, three of the countries had comprehensive bans covering all nine channels assessed by GATS, and the fourth country banned seven of the nine channels. In 12 countries, more persons were aware of advertising in stores than advertising via any other channel. Reducing exposure to TAPS is important to prevent initiation of tobacco use by youths and young adults and to help smokers quit.

PMID: 22622091 [PubMed - indexed for MEDLINE]


Abstract

The efforts of members of the tobacco industry to portray themselves as responsible corporations via ostensibly committed to improved labour practices and public philanthropy have attracted growing criticism. This is particularly true of corporate social responsibility (CSR) schemes undertaken in emerging nations that are designed to rehabilitate the tobacco industry's image among public, government and market opinions in North America and western Europe. In the case of Thailand, sponsorship of arts events and community groups has been one avenue of promoting the industry in a regulatory environment that severely curtails promotion and advertising. The Association of Southeast Asian Nations (ASEAN) Art Award, sponsored by Philip Morris (PM) has provided one such outlet for 10 years. Analysis of PM funding announcements since the end of the ASEAN art programme in Thailand reveals that recent donations to tobacco-related community organisations reinforces the extent to which seemingly generous acts are driven by corporate self-interest rather than social responsibility.

PMID: 18653794 [PubMed - indexed for MEDLINE]
Abstract

AIM: To examine the impact of tobacco advertising policy on adult smokers’ awareness of tobacco promotion in two developing countries—Malaysia and Thailand.

METHODS: Data from 2004 Malaysian and 2000 Thai adult smokers who participated in the baseline wave of the International Tobacco Control Southeast Asia survey (ITC-SEA). Respondents were asked in a face-to-face interview conducted between January and March 2005 to indicate their levels of awareness of tobacco advertising and promotional activities in the last six months.

RESULTS: Unprompted awareness of any tobacco marketing activities was very low in Thailand (20%) but significantly higher in Malaysia (53%; OR = 5.6, 95% CI: 3.5 to 8.9, p<0.001). When prompted about specific locations, Thai adult smokers reported very low recall of tobacco advertising where it was banned, being highest around point of sale, particularly street vendors (7.5%). In contrast, Malaysian adult smokers reported significantly higher levels of awareness of tobacco advertising in all locations (range = 17.7% noticing in disco lounges to 59.3% on posters) including where they are notionally banned (for example, billboards).

CONCLUSIONS: These findings demonstrate that comprehensive tobacco advertising legislation when well implemented can lead to dramatic decline in awareness of tobacco promotion, thus supporting strong implementation of Article 13 of the Framework Convention on Tobacco Control.

PMID: 18218808 [PubMed - indexed for MEDLINE]


Abstract

OBJECTIVE: To examine how British American Tobacco (BAT) used sports sponsorship to circumvent restrictions on tobacco promotion in Thailand, both a key emerging market and a world leader in tobacco control.

METHOD: Analysis of previously confidential BAT company documents.

RESULTS: Since its inception in 1987, BAT's sports sponsorship programme in Thailand has been politically sensitive and legally ambiguous. Given Thailand's ban on imported cigarettes, early events provided promotional support to smuggled brands. BAT's funding of local badminton, snooker, football and cricket tournaments generated substantial media coverage for its brands. After the General Agreement on Trade and Tariffs decision that obliged Thailand to open its cigarette market to imports, Thailand's 1992 tobacco control legislation established one of the world's most restrictive marketing environments. BAT's sponsorship strategy shifted to rallying and motorbike racing, using broadcasts of regional competitions to undermine national regulations. BAT sought to dominate individual sports and to shape media coverage to maximise brand awareness. An adversarial approach was adopted, testing the limits of legality and requiring active enforcement to secure compliance with legislation.

CONCLUSIONS: The documents show the opportunities offered by sports sponsorship to tobacco companies amid increasing advertising restrictions. Before the 1992 tobacco control legislation, sponsored events in Thailand promoted international brands by combining global and local imagery. The subsequent strategy of "regionalisation as defensibility" reflected the capacity of international sport to transcend domestic restrictions. These transnational effects may be effectively dealt with via the Framework Convention on Tobacco Control, but will require the negotiation of a specific protocol.

PMID: 17183011[PubMed - indexed for MEDLINE] PMCID: PMC2465596
5. Economics of tobacco including interference of the tobacco industry


Abstract

BACKGROUND: Telephone-based smoking cessation services (quitlines) offering counselling for smoking cessation without nicotine replacement therapy may be important components of tobacco control efforts in low and middle income countries, but evaluations in such resource-limited settings are lacking. We aimed to evaluate the usage, effectiveness and cost of the Thailand National Quitline (TNQ).

METHODS: Analysis of retrospective data for callers to the TNQ between 2009 and 2012 and a follow-up survey in 1161 randomly selected callers. RESULTS: Between 2009 and 2012 there were 116 862 callers to the TNQ; 36 927 received counselling and at least one follow-up call. Compared with smokers in the general population, callers were younger, more highly educated, more likely to be students, and more likely to smoke cigarettes rather than roll-your-own tobacco. Continuous abstinence rates at 1, 3 and 6 months after calling were 49.9%, 38.0% and 33.1%. The predicted rate at 12 months was 19.54% (95% CI 14.55 to 26.24). Average cost per completed counselling was $31 and the average cost per quitter was $253. Assuming all (and two-thirds) TNQ callers who succeed in quitting would have failed to quit without the assistance of the TNQ, cumulative life years saved (LYS) for the 4-year period were 57 238 (36 733) giving a cost per LYS of $32 (50) (about 7.93 LYS per quitter) and an estimated return on investment over 4 years of 9.01 (5.78).

CONCLUSIONS: A low-cost quitline without nicotine replacement therapy is a promising model for smoking cessation services and likely to offer good value for money in Thailand.

PMID: 24920575 [PubMed - as supplied by publisher]


Summary

Over the past 20 years, with the liberalization of international trade, trade in tobacco and tobacco products has rapidly expanded. This has led to a corresponding rise in tobacco consumption across low- and middle-income countries since the 1980s, and poses a major threat to global public health. This phenomenon highlights the inevitable connection between international trade agreements and the tobacco control policies enshrined in the WHO Framework Convention on Tobacco Control (FCTC). An Expert Intercountry Consultation on Tobacco and Trade was held at the WHO Regional Office for South-East Asia, New Delhi on 3-4 October 2012. A total of 31 participants from the ministries of health, trade and agriculture and legal offices from nine Member States as well as WHO staff from WHO country offices in Bangladesh, India, Indonesia, Myanmar and Nepal attended. Recommendations for the Member States were: (1) establishing and strengthening coordination between the ministries of health and trade on policies and regulations on trade and investment relating to tobacco and tobacco products; (2) promoting advocacy on health perspectives of international and investment agreements; (3) strengthening full implementation of the WHO FCTC; (4) mobilizing more funds for tobacco control in the Member States; (5) ensuring law enforcement and public compliance; and (6) conducting research on health cost studies and alternative livelihood for tobacco farmers. It was recommended that WHO should strengthen the capacities of Member States on health perspectives of international trade and investment agreements.


Summary

There is a fundamental and irreconcilable conflict between the interests of the tobacco industry and public health policy. On the one hand, the tobacco industry produces and promotes a product that has been scientifically proven to be highly addictive and harmful, and which exacerbates social ills, including poverty. On the other hand, governments and the public health sector try to improve the health of the population by implementing measures to reduce tobacco use. As the countries work towards developing and enforcing tobacco control measures, interference by the tobacco industry to counter these measures increases. The growing
manufacturing, distribution and selling components of the tobacco industry get involved in such interference through different means. Article 5.3 of the WHO Framework Convention on Tobacco Control and its Guidelines recommend how such interference should be addressed. Nineteen delegates from different sectors of 10 countries of the WHO South-East Asia Region attended a regional meeting on countering tobacco industry interference, from 19-21 March 2013, at the WHO Regional Office for South-East Asia, New Delhi, to analyse this issue and formulate strategies to address it. The recommendations for the Member States were to: (1) review and revise as needed, the terms of reference of the national tobacco control focal points; (2) formulate and implement, within one year, a communication strategy to raise awareness among various government and nongovernment stakeholders about tobacco industry interference and measures to counter it; (3) develop and implement a sustainable and systematic national and regional monitoring mechanism to ensure that information related to the tobacco industry is current and accurate; (4) review, and where not available, formulate a code of conduct for national officials that provides guidance on how to prevent conflicts of interest, real or perceived, between the civil service, elected officials and other national officials and the tobacco industry interests; and (5) review, and where not available, formulate rules for interaction between government and the tobacco industry, based on Guidelines for Article 5.3 of the WHO Framework Convention on Tobacco Control.


Summary:

Over the past 20 years, with the liberalization of international trade, trade in tobacco and tobacco products has rapidly expanded. This has led to a corresponding rise in tobacco consumption across low- and middle-income countries since the 1980s, and poses a major threat to global public health. This phenomenon highlights the inevitable connection between international trade agreements and the tobacco control policies enshrined in the WHO Framework Convention on Tobacco Control (FCTC). An Expert Intercountry Consultation on Tobacco and Trade was held at the WHO Regional Office for South-East Asia, New Delhi on 3-4 October 2012. A total of 31 participants from the ministries of health, trade and agriculture and legal offices from nine Member States as well as WHO staff from WHO country offices in Bangladesh, India, Indonesia, Myanmar and Nepal attended. Recommendations for the Member States were: (1) establishing and strengthening coordination between the ministries of health and trade on policies and regulations on trade and investment relating to tobacco and tobacco products; (2) promoting advocacy on health perspectives of international and investment agreements; (3) strengthening full implementation of the WHO FCTC; (4) mobilizing more funds for tobacco control in the Member States; (5) ensuring law enforcement and public compliance; and (6) conducting research on health cost studies and alternative livelihood for tobacco farmers. It was recommended that WHO should strengthen the capacities of Member States on health perspectives of international trade and investment agreements.


Summary

Health-care financing continues to be a contentious issue in most Member States of the WHO South-East Asia Region. While making an effort to address the concerns about health services delivery and accessibility, matters regarding mechanisms of financing and budgeting must also be taken into account. To this end, a collaborative and consultative Expert Group Meeting aiming at fostering ideas and exchanging thoughts was organized at WHO SEARO, New Delhi, India, on 13-14 June 2011. Following this meeting, the document titled Tobacco Taxation and Innovative Health-care Financing was developed. It highlights the empirical evidence and existing literature on tobacco taxation, the practices of earmarking taxes for specific projects or programmes in Member States, and innovative methods of financing health-care.

Abstract

The enforced opening of Thailand's cigarette market to imports in 1990 has become a cause celebre in debates about the social and health impacts of trade agreements. At the instigation of leading US-based cigarette manufacturers, the US Trade Representative (USTR) threatened trade sanctions against Thailand to compel the government to liberalize its domestic cigarette market. Thailand's challenge to the USTR led to referral to General Agreement on Tariffs and Trade (GATT) arbitration. While GATT ruled in favour of the USTR on market access, it also found that Thailand could subsequently enact non-discriminatory tobacco control regulation without contravening the GATT agreement. This article contributes to existing literature via its analysis of tobacco industry documents that highlight not only USTR responsiveness to lobbying from tobacco corporations, raising concerns about the drivers of globalization and the limited protection afforded to public health concerns in trade agreements. Significantly, the documents also indicate that USTR support of the tobacco industry was not unconditional, being subject to wider pressures of global trade negotiations. Such qualification notwithstanding, however, ongoing governmental willingness to advance the international interests of tobacco corporations remains a concern from a public health perspective, particularly given the failure of the US to ratify the World Health Organization's Framework Convention on Tobacco Control.
Abstract

The sale and consumption of illicit tobacco increases consumption, impacts public health, reduces tax revenue and provides an argument against tax increases. Thailand has some of the best tobacco control policies in Southeast Asia with one of the highest tobacco tax rates, but illicit trade has the potential to undermine these policies and needs investigating. Two approaches were used to assess illicit trade between 1991 and 2006: method 1, comparison of tobacco used based on tobacco taxes paid and survey data, and method 2, discrepancies between export data from countries exporting tobacco to Thailand and Thai official data regarding imports. A three year average was used to smooth differences due to lags between exports and imports. For 1991-2006, the estimated manufactured cigarette consumption from survey data was considerably lower than sales tax paid, so method 1 did not provide evidence of cigarette tax avoidance. Using method 2 the trade difference between reported imports and exports, indicates 10% of cigarettes consumed in Thailand (242 million packs per year) between 2004 and 2006 were illicit. The loss of revenue amounted to 4,508 million Baht (2002 prices) in the same year, that was 14% of the total cigarette tax revenue. Cigarette excise tax rates had a negative relationship with consumption trends but no relation with the level of illicit trade. There is a need for improved policies against smuggling to combat the rise in illicit tobacco consumption. Regional coordination and implementation of protocols on illicit trade would help reduce incentives for illegal tax avoidance.

PMID:22299425[PubMed - indexed for MEDLINE] PMCID:PMC3509212


Summary

This strategy sets out the objectives and priority activities for resource mobilization for 2010-2011 to ensure effective implementation of the Strategic Action Plan for Tobacco Control in South-East Asia Region. It provides strategic approaches and guidance on the major steps for resource mobilization highlighting the process of assessment for resource requirement and the potential for raising it; analysis of donor intelligence, building alliance and carrying out advocacy. It emphasizes on the need to diversify funding sources for sustainable financing to the programme and also on the importance of realistic programme development and management of resources.


Abstract

A wide range of cigarette prices can undermine the impact of tobacco tax policy when smokers switch to cheaper cigarettes instead of quitting. In order to better understand this behaviour, we study socio-economic determinants of price/brand choices in two different markets: a semi-monopolistic market in Thailand and a competitive market in Malaysia. The hypothesis that the factors affecting the price/brand choice are different in these two markets is analysed by employing a 2005 survey among smokers. This survey provides a unique perspective on market characteristics usually described only in business reports by the tobacco industry. We found that smokers in Thailand have fewer opportunities to trade down to save money on cigarettes, but pay lower prices than smokers in Malaysia, despite Thailand's higher tax rate. The Malaysian market, on the other hand, offers many possibilities to shop around for cheaper cigarettes. Higher income and education increase the price paid per cigarette in both countries, but the impact of these factors is larger in Malaysia. This has implications for sensitivity to cigarette prices. Using tax policy alone should be a more effective tobacco control measure in Thailand as compared to Malaysia. The effectiveness of a tax increase in Malaysia can be improved by adding programmes focusing on smoking cessation among low-income/low-educated smokers.

PMID: 19548160 [PubMed - indexed for MEDLINE]

Abstract

The efforts of members of the tobacco industry to portray themselves as responsible corporations via ostensible commitment to improved labour practices and public philanthropy have attracted growing criticism. This is particularly true of corporate social responsibility (CSR) schemes undertaken in emerging nations that are designed to rehabilitate the tobacco industry's image among public, government and market opinions in North America and Western Europe. In the case of Thailand, sponsorship of arts events and community groups has been one avenue of promoting the industry in a regulatory environment that severely curtails promotion and advertising. The Association of Southeast Asian Nations (ASEAN) Art Award, sponsored by Philip Morris (PM) has provided one such outlet for 10 years. Analysis of PM funding announcements since the end of the ASEAN art programme in Thailand reveals that recent donations to tobacco-related community organisations reinforces the extent to which seemingly generous acts are driven by corporate self-interest rather than social responsibility.

PMID: 18653794 [PubMed - indexed for MEDLINE]


Abstract

OBJECTIVE: To estimate the incremental cost-effectiveness ratio of a structured community pharmacist-based smoking cessation programme compared with usual care.

DESIGN: A cost-effectiveness study using a healthcare system perspective Population: Two simulated cohorts of smokers: male and female aged 40, 50 and 60 years who regularly smoke 10-20 cigarettes per day. Intervention and comparator: A structured community pharmacist-based smoking cessation (CPSC) programme compared to usual care.

MAIN OUTCOME MEASURE: Cost per life year gained (LYG) attributable to the smoking cessation programme.

RESULTS: The CPSC programme results in cost savings of 17,503.53 baht (pounds250; euro325; $500) to the health system and life year gains of 0.18 years for men and; costs savings of 21,499.75 baht (pounds307; euro399; $614) and life year gains of 0.24 years for women. A series of sensitivity analyses demonstrate that both cost savings and life year gains are sensitive to variations in the discount rate and the long-term smoking quit rate associated with the intervention.

CONCLUSION: From the perspective of the health system, the CPSC programme yields cost savings and life year gains. This finding provides important information for health policy decision-makers when determining the magnitude of resources to be allocated to smoking cessation service in community pharmacy.

PMID: 18285385[PubMed - indexed for MEDLINE]


Abstract

BACKGROUND: This paper examines the efforts of consultants affiliated with Philip Morris (PM), the world's leading transnational tobacco corporation, to influence scientific research and training in Thailand via the Chulabhorn Research Institute (CRI). A leading Southeast Asian institute for environmental health science, the CRI is headed by Professor Dr. Her Royal Highness Princess Chulabhorn, the daughter of the King of Thailand, and it has assumed international significance via its designation as a World Health Organization (WHO) Collaborating Centre in December 2005.
METHODS AND FINDINGS: This paper analyses previously confidential tobacco industry documents that were made publicly available following litigation in the United States. PM documents reveal that ostensibly independent overseas scientists, now identified as industry consultants, were able to gain access to the Thai scientific community. Most significantly, PM scientist Roger Walk has established close connections with the CRI. Documents indicate that Walk was able to use such links to influence the study and teaching of environmental toxicology in the institute and to develop relations with key officials and local scientists so as to advance the interests of PM within Thailand and across Asia. While sensitivities surrounding royal patronage of the CRI make public criticism extremely difficult, indications of ongoing involvement by tobacco industry consultants suggest the need for detailed scrutiny of such relationships.

CONCLUSIONS: The establishment of close links with the CRI advances industry strategies to influence scientific research and debate around tobacco and health, particularly regarding secondhand smoke, to link with academic institutions, and to build relationships with national elites. Such strategies assume particular significance in the national and regional contexts presented here amid the globalisation of the tobacco pandemic. From an international perspective, particular concern is raised by the CRI's recently awarded status as a WHO Collaborating Centre. Since the network of WHO Collaborating Centres rests on the principle of “using national institutions for international purposes,” the documents presented below suggest that more rigorous safeguards are required to ensure that such use advances public health goals rather than the objectives of transnational corporations.

PMID: 19108600 [PubMed - indexed for MEDLINE] PMCID: PMC2605886


Abstract

OBJECTIVE: To estimate the direct out-of-pocket medical costs of treating major diseases attributable to smoking in Thailand in 2006.

MATERIAL AND METHOD: A prevalence-based, disease-specific, approach was used to estimate the direct medical costs of treating lung cancer, chronic obstructive pulmonary disease (COPD), and coronary heart disease (CHD) attributable to smoking. Epidemiological parameters were obtained from the literature; historical out-of-pocket cost data were used to estimate 2006 expenditure.

RESULTS: The number of cases attributable to smoking in 2006 was 5,299 for lung cancer, 624,309 for COPD, and 52,605 for CHD. The out-of-pocket expenditures for treatment were 368.49 million baht for lung cancer, 7,714.88 million baht for COPD, and 1,773.65 million baht for CHD. Total smoking-attributable out-of-pocket medical costs amounted to 9,857.02 million baht, 0.48% of GDP in 2006.

CONCLUSION: The prevalence-based, disease-specific, analysis described here shows that the health and economic impact of smoking in Thailand are substantial, and should be reduced by implementing smoking-cessation and related tobacco control policies of the types found effective in reducing the prevalence of smoking in other countries.

PMID: 17957939 [PubMed - indexed for MEDLINE]


Abstract

OBJECTIVE: To examine how British American Tobacco (BAT) used sports sponsorship to circumvent restrictions on tobacco promotion in Thailand, both a key emerging market and a world leader in tobacco control.

METHOD: Analysis of previously confidential BAT company documents.
RESULTS: Since its inception in 1987, BAT's sports sponsorship programme in Thailand has been politically sensitive and legally ambiguous. Given Thailand's ban on imported cigarettes, early events provided promotional support to smuggled brands. BAT's funding of local badminton, snooker, football and cricket tournaments generated substantial media coverage for its brands. After the General Agreement on Trade and Tariffs decision that obliged Thailand to open its cigarette market to imports, Thailand's 1992 tobacco control legislation established one of the world's most restrictive marketing environments. BAT's sponsorship strategy shifted to rallying and motorbike racing, using broadcasts of regional competitions to undermine national regulations. BAT sought to dominate individual sports and to shape media coverage to maximise brand awareness. An adversarial approach was adopted, testing the limits of legality and requiring active enforcement to secure compliance with legislation.

CONCLUSIONS: The documents show the opportunities offered by sports sponsorship to tobacco companies amid increasing advertising restrictions. Before the 1992 tobacco control legislation, sponsored events in Thailand promoted international brands by combining global and local imagery. The subsequent strategy of "regionalisation as defensibility" reflected the capacity of international sport to transcend domestic restrictions. These transnational effects may be effectively dealt with via the Framework Convention on Tobacco Control, but will require the negotiation of a specific protocol.

PMID: 17183011 [PubMed - indexed for MEDLINE] PMCID: PMC2465596

MacKenzie R, Collin J, Sriwongcharoen K, Muggli ME. "If we can just 'stall' new unfriendly legislations, the scoreboard is already in our favour": transnational tobacco companies and ingredients disclosure in Thailand. Tob Control. 2004 Dec; 13 Suppl 2:ii79-87.

Abstract

OBJECTIVES: To review the strategies employed by overseas cigarette manufacturers operating in Thailand to obstruct the passage and subsequent enforcement of national public health legislation, specifically the ingredients disclosure provision of the 1992 Tobacco Products Control Act.

METHODS: Analysis of previously confidential tobacco industry documents relevant to non-compliance with the ingredients disclosure legislation.

RESULTS: Requirement for disclosure of ingredients contained in cigarettes contained in the Tobacco Products Control Act was identified by transnational tobacco companies (TTCs) not only as a significant threat to their operations in Thailand, but as a dangerous global precedent. Industry documents reveal a determined campaign to block, stall, or amend the proposed regulation during the legislative process. Industry representatives petitioned the Ministry of Health to revise the requirement from by brand disclosure to a more palatable by company submission. Strategies were adapted in the wake of the Act. Most significantly, the industry in concert with embassies in Bangkok threatened the Thai government with appeals to international trade bodies on the grounds of violation of international agreements. Industry documents also reveal that as submission of ingredient lists appeared unavoidable, leading companies operating in Thailand endeavoured to confound the disclosure requirement by disguising ingredients and reformulating brand recipes.

CONCLUSIONS: The evidence presented highlights the importance of ingredients regulation and demonstrates how health policy can be transformed during its implementation. A greater understanding of trade agreements emerges as a priority for global tobacco control.

PMID: 15564225 [PubMed - indexed for MEDLINE] PMCID: PMC1766166


Abstract

OBJECTIVE: To describe how the transnational tobacco industry has collaborated with local Asian tobacco monopolies and companies to promote a scientific and regulatory agenda. METHODS: Analysis of previously secret tobacco industry documents.

RESULTS: Transnational tobacco companies began aggressively entering the Asia market in the 1980s, and the current tobacco industry in Asia is a mix of transnational and local monopolies or private companies. Tobacco industry documents demonstrate that, in 1996, Philip Morris led an organisation of scientific representatives from
different tobacco companies called the Asian Regional Tobacco Industry Science Team (ARTIST), whose membership grew to include monopolies from Korea, China, Thailand, and Taiwan and a company from Indonesia. ARTIST was initially a vehicle for PM's strategies against anticipated calls for global smoke-free areas from a World Health Organization secondhand smoke study. ARTIST evolved through 2001 into a forum to present scientific and regulatory issues faced primarily by Philip Morris and other transnational tobacco companies. Philip Morris' goal for the organisation became to reach the external scientific and public health community and regulators in Asia. CONCLUSION: The Asian tobacco industry has changed from an environment of invasion by transnational tobacco companies to an environment of participation with Philip Morris' initiated activities. With this participation, tobacco control efforts in Asia face new challenges as Philip Morris promotes and integrates its scientific and regulatory agenda into the local Asian tobacco industry. As the local Asian tobacco monopolies and companies can have direct links with their governments, future implementation of effective tobacco control may be at odds with national priorities.

PMID: 15564214 [PubMed - indexed for MEDLINE] PMCID: PMC1766165


Abstract

OBJECTIVES: To examine the complicity of British American Tobacco (BAT) in cigarette smuggling in Asia, and to assess the centrality of illicit trade to regional corporate strategy.

METHODS: Analysis of previously confidential documents from BAT's Guildford depository. An iterative strategy combined searches based on geography, organisational structure, and key personnel, while corporate euphemisms for contraband were identified by triangulation.

RESULTS: BAT documents demonstrate the strategic importance of smuggling across global, regional, national, and local levels. Particularly important in Asia, contraband enabled access to closed markets, created pressure for market opening, and was highly profitable. Documents demonstrate BAT's detailed oversight of illicit trade, seeking to reconcile the conflicting demands of control and deniability.

CONCLUSIONS: BAT documents demonstrate that smuggling has been driven by corporate objectives, indicate national measures by which the problem can be addressed, and highlight the importance of a coordinated global response via WHO's Framework Convention on Tobacco Control.

PMID:15564212[PubMed - indexed for MEDLINE] PMCID:PMC1766170


Abstract

OBJECTIVE: To investigate how affordable cigarettes are in developed and developing countries, and to calculate by how much the affordability of cigarettes has changed between 1990 and 2001; and secondly, to investigate the relation between cigarette affordability and consumption.

DESIGN: Affordability was defined as the cost of cigarettes relative to per capita income. Trends in cigarette affordability, and affordability elasticities of demand, were estimated using regression techniques.

SUBJECTS: Seventy countries were investigated, of which 28 are categorised as high income developed countries, while 42 are categorised as developing countries. Cigarette prices were obtained for the main city/cities in the countries.

RESULTS: Despite the fact that cigarettes are more expensive in developed countries, the high levels of income make cigarettes more affordable in these countries vis-a-vis developing countries. Of the 28 developed countries, cigarettes became more affordable in 11 and less affordable in 17 countries during the 1990s. Of the 42 developing countries, cigarettes became more affordable in 24 and less affordable in 18 countries. Based on a

An annotated bibliography of scientific studies done on tobacco topic in WHO South-East Asia Region countries 489
cross sectional analysis, a 1% increase in the relative income price (the inverse of cigarette affordability) is expected to decrease cigarette consumption by between 0.49-0.57%.

**CONCLUSIONS:** Cigarette affordability, more than just the price, determines cigarette consumption. While cigarettes have become more affordable in many developing countries, some developing countries (for example, South Africa, Poland, and Thailand) have implemented strong and effective tobacco control policies, and have been able to decrease cigarette consumption as a result.

PMID:15564616[PubMed - indexed for MEDLINE] PMCID:PMC1747952
TIMOR-LESTE

1. Tobacco use Surveillance (surveys and reports)

1.1. Youth in general


**Comment on**

- Prevalence and correlates of current cigarette smoking among adolescents in East Timor-Leste. [Indian Pediatr. 2008]

**PMID:** 19129562 [PubMed - indexed for MEDLINE]

1.1.1. Global Youth Tobacco Survey (GYTS)


**Abstract**

**BACKGROUND:** At least two rounds of the Global Youth Tobacco Survey (GYTS) have been completed in most of the countries in the World Health Organization South-East Asia region. Comparing findings from these two rounds provides trend data on smokeless tobacco (SLT) use for the first time.

**METHODS:** This study uses GYTS data from Bangladesh, Bhutan, India, Indonesia, Maldives, Myanmar, Nepal, Sri Lanka, Thailand, and Timor-Leste during 2006-2013. GYTS is a nationally representative survey of 13-15-year-old students using a consistent and standard protocol. Current SLT use is defined as using any kind of SLT products, such as chewing betel quid or non betel quid or snuffing any other products orally or through the nasal route, during the 30 days preceding the survey. Prevalence and 95% confidence intervals were computed using SAS/SUDAAN software.

**RESULTS:** According to most recent GYTS data available in each country, the prevalence of current use of SLT among youth varied from 5.7% in Thailand to 23.2% in Bhutan; among boys, from 7.1% in Bangladesh to 27.2% in Bhutan; and among girls, from 3.7% in Bangladesh to 19.8% in Bhutan. Prevalence of SLT was reported significantly higher among boys than girls in Bhutan (boys 27.2%; girls 19.8%), India (boys 11.1%; girls 6.0%), Maldives (boys 9.2%; girls 2.9%), Myanmar (boys 15.2%; girls 4.0%), and Sri Lanka (boys 13.0%; girls 4.1%). Prevalence of current SLT use increased in Bhutan from 9.4% in 2009 to 23.2% in 2013, and in Nepal from 6.1% in 2007 to 16.2% in 2011.

**CONCLUSION:** The findings call for countries to implement corrective measures through strengthened policy and enforcement.

**PMID:** 25526249 [PubMed - in process]

Abstract

BACKGROUND: This paper examines the prevalence of current tobacco use among youth and adults in selected member countries of the South-East Asia Region using the data from school and household-based surveys included in the Global Tobacco Surveillance System.

MATERIALS AND METHODS: Global Youth Tobacco Survey (GYTS) data (years 2007-2009) were used to examine current tobacco use prevalence among youth, whereas Global Adult Tobacco Survey (GATS) data (years 2009-2010) were used to examine the prevalence among adults. GYTS is a school-based survey of students aged 13-15, using a two-stage cluster sample design, and GATS is a household survey of adults age 15 and above using a multi-stage stratified cluster design. Both surveys used a standard protocol for the questionnaire, data collection and analysis.

RESULTS: Prevalence of current tobacco use among students aged 13-15 varied from 5.9% in Bangladesh to 56.5% in Timor-Leste, and the prevalence among adults aged 15 and above was highest in Bangladesh (43.3%), followed by India (34.6%) and Thailand (27.2%). Reported prevalence was significantly higher among males than females for adults and youth in all countries except Bangladesh, Sri Lanka and Timor-Leste. Current use of tobacco other than manufactured cigarettes was notably higher than current cigarette smoking among youth aged 13-15 years in most countries of the Region, while the same was observed among adults in Bangladesh, India and Thailand, with most women in those countries, and 49% of men in India, using smokeless tobacco.

CONCLUSION: Tobacco use among youth and adults in member countries of the region is high and the pattern of tobacco consumption is complex. Tobacco products other than cigarettes are commonly used by youth and adults, as those products are relatively cheaper than cigarettes and affordable for almost all segments of the population. As a result, use of locally produced smoked and smokeless tobacco products is high in the region. Generating reliable data on tobacco use and key tobacco control measures at regular intervals is essential to better understand and respond with effective tobacco control intervention.

PMID: 22089684 [PubMed - indexed for MEDLINE]


Abstract

The East Timor GYTS includes data on prevalence of cigarette and other tobacco use as well as information on five determinants of tobacco use: access/availability and price, exposure to secondhand smoke (SHS), cessation, media and advertising, and school curriculum. These determinants are components East Timor could include in a comprehensive tobacco control program. The East Timor GYTS was a school-based survey of students in classes 1, 2, and 3 conducted in 2009. A two-stage cluster sample design was used to produce representative data for East Timor. At the first stage, schools were selected with probability proportional to enrollment size. At the second stage, classes were randomly selected and all students in selected classes were eligible to participate. The school response rate was 96.0%, the class response rate was 100.0%, the student response rate was 80.5%, and the overall response rate was 77.3%. A total of 890 students aged 13-15 participated in the East Timor GYTS.


Abstract

Timor Leste ratified the WHO Framework Convention on Tobacco Control (WHO FCTC) on December 22, 2004. The WHO FCTC requires all Parties to inform all persons of the health consequences of tobacco consumption and exposure to tobacco smoke. Each Party has agreed to develop, implement and evaluate effective tobacco control programs to measure progress in reaching the goals of the WHO FCTC. The Global Youth Tobacco Survey (GYTS) was developed to provide data on youth tobacco use to countries for their development of youth based tobacco control programs. The tobacco control program in Timor Leste has been developed under the Ministry of Health, specifically within the Non-Communicable Diseases unit. Health education concerning tobacco has been done in line with the oral health program which has been conducted annually since 1999 (after the independence). The current tobacco control strategy is mainly focused on the community setting, not yet particularly on schools setting. Data in this report can be used as baseline measures for future evaluation of the tobacco control programs implemented by the Ministry of Health. The key for Timor Leste is to implement and
enforce the provisions of restricting tobacco access for young people. The GYTS provide information of indicators in measuring achievement of seven WHO FCTC Articles (surveillance and monitoring, prevalence, exposure to secondhand smoke, school-based tobacco control, cessation, media and advertising, and minor’s access and availability). Findings from this GYTS Timor Leste 2006 showed several main tobacco issues, include high prevalence of current smokers among the students (32.4%) compared to other South East Asia Region countries. Almost half of the students who currently smoke who usually buy their cigarettes in a store were not refused to purchase cigarette because of their age. Findings from the GYTS can be used as an indication that particular intervention strategy or school based intervention has to be done in the near future.

1.2. **Children (including school going children)**


**Abstract**

**OBJECTIVES:** To determine the prevalence and correlates for current cigarette smoking.

**DESIGN:** Secondary analysis of the East Timor-Leste Global Youth Tobacco Survey conducted in 2006.

**SETTING:** Public and private schools registered with the Ministry of Education.

**PARTICIPANTS:** A two-stage cluster sample of 1790 students in Grades 7 to 9. Schools were selected with probability proportional to enrolment size, and classes were randomly selected in each school. All students in selected classes were eligible to participate in the survey. The school and student response rates were 96.0% and 84.5%, respectively.

**MAIN OUTCOME MEASURE:** Prevalence of current cigarette smoking.

**RESULTS:** Out of 1790 adolescents, 52.1% were of ages less than 15 years, 51.8% were males, 42.8% reported having some pocket money in a month, and 72.7% had at least a parent who was a smoker. Prevalence of current cigarette smoking was 40.3%. Current smokers also reported having bought cigarettes from peddlers (32.4%), someone bought for them (16.7%), got from someone older (13.7%), borrowed (13.3%), and stole (3.4%). Males were more likely to be smokers than females (59.0% versus 19.3%). Factors positively associated with current smoking were: parental smoking; closest friend smoking; amount of pocket money; and exposure to anti-tobacco messages.

**CONCLUSIONS:** East Timor has one of the highest prevalence of cigarette smoking among adolescents. The fact that exposure to anti-tobacco messages was associated with being a smoker may be evidence suggesting that anti-tobacco messages, especially from tobacco-related industry, may have unintended consequences.

PMID: 19129563 [PubMed - indexed for MEDLINE]

1.3. **Educational professionals and other professional groups**

1.3.1. **Global School Personnel Survey (GSPS)**


1.4. **Women**


**Abstract**

**BACKGROUND:** Worldwide, use of tobacco is viewed as an important threat to the health of pregnant women and their children. However, the extent of tobacco use in pregnant women in low-income and middle-income countries (LMICs) remains unclear. We assessed the magnitude of tobacco use in pregnant women in LMICs(including Timor Leste).
METHODS: We used data from Demographic and Health Surveys (DHS) done in 54 LMICs between Jan 1, 2001, and Dec 1, 2012, comprising 58,922 pregnant women (aged 15-49 years), which were grouped by WHO region. Prevalence of current tobacco use (smoked and smokeless) was estimated for every country. Pooled estimates by regions and overall were obtained from random-effects meta-analysis.

FINDINGS: Pooled prevalence of any tobacco use in pregnant women in LMICs was 2.6% (95% CI 1.8-3.6); the lowest prevalence was in the African region (2.0%, 1.2-2.9) and the highest was in the Southeast Asian region (5.1%, 1.3-10.9). The pooled prevalence of current tobacco smoking in pregnant women ranged from 0.6% (0.3-0.8) in the African region to 3.5% (1.5-12.1) in the Western Pacific region. The pooled prevalence of current smokeless tobacco use in pregnant women was lowest in the European region (0.1%, 0.0-0.3) and highest in the Southeast Asian region (2.6%, 0.0-7.6).

INTERPRETATION: Overall, tobacco use in pregnant women in LMICs was low; however high prevalence estimates were noted in some LMICs. Prevention and management of tobacco use and exposure to second-hand smoke in pregnancy is crucial to protect maternal and child health in LMICs.

Comment in


PMID: 25304418 [PubMed - in process]


Summary

This "Brief Profile on Gender and Tobacco in South-East Asia Region" emphasizes the need for a gender-specific approach to tobacco control. It urges Member States to take measures to address gender-specific issues when developing tobacco control strategies. It also describes the situation, challenges and opportunities related to gender and tobacco use in the Region.


1.5. General population


Abstract

BACKGROUND: In South and Southeast Asian countries, tobacco is consumed in diverse forms, and smoking among women is very low. We aimed to provide national estimates of prevalence and social determinants of smoking and smokeless tobacco use among men and women separately.

METHODS:

Data from Demographic and Health Surveys completed in nine countries (India, Pakistan, Nepal, Bangladesh, Maldives, Philippines, Cambodia, Indonesia, and Timor Leste) were analyzed. Current smoking or smokeless tobacco use was assessed as response "yes" to one or more of three questions, such as "Do you currently smoke cigarettes?" Weighted country-level prevalence rates for socio-economic subgroups were calculated for smoking and smokeless tobacco use. Binary logistic regression analyses were done on STATA/IC (version 10) by 'svy' command.

RESULTS: Prevalence and type of tobacco use among men and women varied across the countries and among socio-economic sub groups. Smoking prevalence was much lower in women than men in all countries. Smoking
among men was very high in Indonesia, Maldives, and Bangladesh. Smokeless tobacco (mainly chewable) was used in diverse forms, particularly in India, among both men and women. Chewing tobacco was common in Nepal, Bangladesh, Maldives, and Cambodia. Both smoking and smokeless tobacco use were associated with higher age, lower education, and poverty, but their association with place of residence and marital status was not uniform between men and women across the countries.

CONCLUSION: Policymakers should consider type of tobacco consumption and their differentials among various population subgroups to implement country-specific tobacco control policies and target the vulnerable groups. Smokeless tobacco use should also be prioritized in tobacco control efforts.

PMID: 25183954 [PubMed] PMCID: PMC4151025


Abstract

IMPORTANCE: Tobacco is a leading global disease risk factor. Understanding national trends in prevalence and consumption is critical for prioritizing action and evaluating tobacco control progress.

OBJECTIVE: To estimate the prevalence of daily smoking by age and sex and the number of cigarettes per smoker per day for 187 countries from 1980 to 2012.

DESIGN: Nationally representative sources that measured tobacco use (n = 2102 country-years of data) were systematically identified. Survey data that did not report daily tobacco smoking were adjusted using the average relationship between different definitions. Age-sex-country-year observations (n = 38,315) were synthesized using spatial-temporal gaussian process regression to model prevalence estimates by age, sex, country, and year. Data on consumption of cigarettes were used to generate estimates of cigarettes per smoker per day.

MAIN OUTCOMES AND MEASURES: Modeled age-standardized prevalence of daily tobacco smoking by age, sex, country, and year; cigarettes per smoker per day by country and year.

RESULTS: Global modeled age-standardized prevalence of daily tobacco smoking in the population older than 15 years decreased from 41.2% (95% uncertainty interval [UI], 40.0%-42.6%) in 1980 to 31.1% (95% UI, 30.2%-32.0%; P < .001) in 2012 for men and from 10.6% (95% UI, 10.2%-11.1%) to 6.2% (95% UI, 6.0%-6.4%; P < .001) for women. Global modeled prevalence declined at a faster rate from 1996 to 2006 (mean annualized rate of decline, 1.7%; 95% UI, 1.5%-1.9%) compared with the subsequent period (mean annualized rate of decline, 0.9%; 95% UI, 0.5%-1.3%; P = .003). Despite the decline in modeled prevalence, the number of daily smokers increased from 721 million (95% UI, 700 million-742 million) in 1980 to 967 million (95% UI, 944 million-989 million; P < .001) in 2012. Modeled prevalence rates exhibited substantial variation across age, sex, and countries, with rates below 5% for women in some African countries to more than 55% for men in Timor-Leste and Indonesia. The number of cigarettes per smoker per day also varied widely across countries and was not correlated with modeled prevalence.

CONCLUSIONS AND RELEVANCE: Since 1980, large reductions in the estimated prevalence of daily smoking were observed at the global level for both men and women, but because of population growth, the number of smokers increased significantly. As tobacco remains a threat to the health of the world's population, intensified efforts to control its use are needed.

Comment in

- Smoking rates fall among Indian men and rise among women, finds study. [BMJ. 2014]

PMID: 24399557 [PubMed - indexed for MEDLINE]

2. Tobacco control interventions (including policies, legislations and taxation)


Abstract

The tobacco epidemic is an increasing threat to public health with the tobacco burden particularly high in WHO's South-East Asia Region (SEAR). The Region has many obstacles to tobacco control, but despite these challenges, significant progress has been made in many countries. Although much work still needs to be done, SEAR countries have nevertheless implemented strong and often innovative tobacco control measures that can be classified as "best practices," with some setting global precedents. The best practice measures implemented in SEAR include bans on gutka, reducing tobacco imagery in movies, and warning about the dangers of tobacco. In a time of scarce resources, countries in SEAR and elsewhere must ensure that the most effective and cost-efficient measures are implemented. It is hoped that countries can learn from these examples and as appropriate, adapt these measures to their own specific cultural, social and political realities.

PMID: 23442393 [PubMed - indexed for MEDLINE]


Summary

This Regional Strategy for Tobacco Control primarily provides a longer-term strategic guidance to Member States of the South-East Asia Region to support them in formulating evidence-based policies and designing a sustained and cost-effective programme on tobacco control to counter successfully the rising public health concerns of tobacco use in the Region. The Region is home to around 250 million smokers and nearly the same number of smokeless tobacco users. About 1.3 million deaths occur every year, including around 160 000 deaths due to exposure to second-hand smoke. The increasing trend of tobacco use and its devastating effects pose a grave threat to the health and well-being of the people of the Region. Thus, the implementation of the Regional Strategy is expected to eventually protect the people of the Region from the enormous negative health, social, economic and environmental consequences of tobacco consumption and exposure to tobacco smoke.

World Health Organization, Regional Office for South-East Asia. Profile on implementation of WHO framework convention on tobacco control in the South-East Asia Region: Tobacco Kit. New Delhi: WHO SEARO; 2011.

Summary

This profile on the implementation of the WHO Framework Convention on Tobacco Control in the South-East Asia Region provides an overview of the status of the implementation of the convention in the eleven Member States of the SEA Region. It highlights some major milestones achieved as well as the challenges faced while implementing tobacco control measures in Member countries.

Summary

Smokeless tobacco consumption in the South-East Asia Region is a growing threat to health. The region is a hub for smokeless tobacco production and use. This category of tobacco product is manufactured in various forms. The diversity of these tobacco products, their availability and affordability make them obvious alternatives to the relatively more expensive cigarettes. However, the dangers and risks associated with smokeless tobacco are not well understood by the population. Smokeless tobacco is not perceived as an urgent threat in many of the Member countries and consequently, tobacco control efforts for this type of tobacco use are not intense. The tobacco control agenda needs to keep up the pressure and apply a wider approach and holistic strategies to address this issue. To this end, the "Expert Group Meeting on Smokeless Tobacco Control and Cessation" was convened in New Delhi, India, on 16-17 August 2011. The meeting allowed experts to share information, identify the next steps on smokeless tobacco control and cessation, and provide inputs to a policy paper to be published later. This report compiles the issues faced by Member States concerning smokeless tobacco and provides recommendations to policy-makers and stakeholders.


Summary

Tobacco Cessation: A Manual for Nurses, Health Workers and other Health Professionals is a comprehensive manual on tobacco cessation. It provides a detailed overview of the extent and patterns of use of tobacco products in the South-East Asia (SEA) Region and the related health burden. Among the top 10 countries globally with the highest levels of tobacco use among males, as many as three are from the SEA Region. The Manual highlights the need to provide tobacco cessation interventions by nurses, health workers and other health professionals, and graphically depicts the adverse health effects of tobacco on almost all organs of the human body. In the section on interventions, the Manual reiterates that tobacco cessation efforts start with the successful identification of tobacco use. It provides effective tools and techniques for tobacco cessation interventions, including visits and follow-up of patients, listing of pros and cons, worksheets, group-based interventions and pharmacotherapy. Apart from the usual methods of cessation such as tapering off and abrupt cessation ('cold turkey'), the Manual also lists new and innovative interventions such as the 'Recovery Calendar'. Above all, the Manual highlights the importance of recognizing the dangerous effects of tobacco use, the benefits of quitting and the need to provide effective follow-up to prevent 'lapse' and 'relapse'. It includes a series of succinct, ready-to-use methods, counselling techniques and model motivational tools that can be practiced by the health professional to promote tobacco cessation.


Summary

Helping People Quit Tobacco: A Manual for Doctors and Dentists is a comprehensive dossier on tobacco cessation with the help of intervention from doctors and dentists. The document begins with the premise that the core responsibility of any doctor or dentist includes reducing the use of tobacco among his patients and in the community, and encouraging tobacco cessation. The importance of the TEACH tool to meet the MPOWER goals of the World Health Organization are also enunciated. The Manual cites relevant statistics from the apex global tobacco surveys to highlight the extent and enormity of the tobacco epidemic in the South-East Asia Region, and also outlines the nature of harm caused by tobacco use, its inherent links with several debilitating diseases and the manifold risks of using smoking and smokeless tobacco products. The Manual encourages doctors and dentists to identify at the earliest possible stage tobacco use in a patient, and provides step-by-step guidelines on intervention and assisted cessation through counselling, motivational tools and medication or pharmacotherapy. A concluding section provides details on 'lapse' and 'relapse' and how to overcome the same.

Summary

Reducing the use of tobacco is a complex task as it involves enormous socio-cultural and health dimensions. It requires a multi-sectoral and integrated approach that includes consistent and continuous communication for behavioural and social change. Communication as such, is a strategic process to influence individual and group behaviour that needs systematic planning and implementation. This document tends to define the framework and the key elements of communication for tobacco control to be used in the Member States of the South-East Asia Region. It focuses on the major approaches of communication and guiding principles for planning and using the communication components for designing the effective communication for tobacco control programme. It suggests a model for communication planning based on communication objectives, target groups and potential barriers which determines the communication approach, message development and selection of media. It emphasizes on the importance of using media mix, partnership, capacity building and regular evaluation of communication activities.


Summary

Since 2007 the Bloomberg Global Initiative to Reduce Tobacco Use (BGI) is being implemented in the South-East Asia Region. Four countries from the Region - Bangladesh, India, Indonesia and Thailand - were selected as priority countries under the Initiative. In 2007 both human and financial support was provided to these countries to strengthen their capacity for tobacco control. The WHO South-East Asia Region was the first and only Region to have organized an orientation workshop for all BGI staff. The workshop was found to be useful for the implementation of the Initiative in the Region. It has also enhanced the knowledge and team spirit of the whole BGI team and provided a unique opportunity to discuss and share the challenges that the Initiative is facing in terms of coordination for effective implementation. The workshop provided the platform to discuss and decide on a common approach to take the Initiative to its logical fruition.


Summary

Smoking and exposure to second-hand smoke (SHS) are major contributors to the chronic disease burden in the South-East Asia Region. Due to weak tobacco control measures, especially inadequate measures in the area of SHS, a very large population in the Region is exposed to SHS. The regional profile on Smoke-free Environments depicts the situation with respect to exposure to SHS in the Region. It also describes briefly the existing measures in the Region for protecting people from SHS exposure. Making environments completely smoke-free is the most effective way to protect the population from exposure to SHS everywhere, including public places and workplaces. This can only be done by developing and strengthening smoke-free policies and legislation, and enforcing the same.


Summary

This Manual is designed for teachers who work with 13-15-year-old students in Member countries of the World Health Organization (WHO)'s South-East Asia (SEA) Region. The Manual uses skill-based health education through curricular and co-curricular activities. Skill-based health education is designed to help students acquire the knowledge, attitude and skills that are needed to make informed choices and decisions, understand the consequences of tobacco use and tobacco advertising, adopt and practice healthy behaviours to avoid risks and create conditions that are conducive to health. This approach also empowers students to contribute to the creation of tobacco-free environment in which they learn and live. The Manual provides young people with an opportunity to participate in an environmental approach to tobacco control. The decision that young people make
about tobacco use are heavily influenced by the physical, social, economic and legal environments in which they live. The activities in the Manual represent a departure from the traditional approach of simply educating students not to use tobacco, which is often considered an ineffective strategy. The progressive vision helps young people move beyond a reliance on awareness education to embrace a comprehensive and science-based approach. The focus in the Manual is on what young people can do to create tobacco-free norms and environments and to thwart manipulative efforts of the tobacco industry to create tobacco addictions. The Manual includes classroom activities which a school can adopt either in the form of a regular or optional curriculum. It uses a series of activities which can be carried out as interactive/participatory activities in classrooms (curricular), or as field activities in the community (co-curricular activities). A participatory approach gives students the opportunity to observe and actively practice skills, thus being engaged in "learning by doing." In order to make these activities interactive, the class is split into small working groups and discussions are held in bigger groups based on inputs from the smaller groups. Schools that would use this Manual may adopt a similar pattern or can modify it according to their situations and needs. Teaching posters, handouts, worksheets, and answer sheets, are provided in this Manual to be used in any combination by the teacher or simply as a guide for teaching. Additionally, clippings from newspapers, a few sets of graph paper, pencils, a black board, and chalk may be used as supplementary materials by the teacher.


Summary

As part of the General Obligations under Article 5 of the WHO Framework Convention on Tobacco Control (FCTC), each Party shall develop, implement and periodically update and review multisectoral national tobacco control strategies, plans of action and programmes in order to fully comply with the provisions of the Convention. In order to provide some general guidelines on how to develop these strategies and plans of action, the Regional Strategy for Tobacco Control and Regional Plan of Action for Tobacco Control were developed by the Regional Office. The Regional Strategy contains the vision and strategic plan for tobacco control in the WHO South-East Asia Region for the next five years (2006-2010). The Plan of Action was based on the Regional Strategy for Tobacco Control (2006-2010). While the Convention provides guidelines to reduce the harm from tobacco, definitive actions to control tobacco have to take place at the country level. The successful implementation of the FCTC provisions depends almost entirely on the ability of the countries. Some countries in the Region have already developed their national strategies and plans of action and others are in the process of doing so. These two documents would be helpful in revising the existing national strategies and plans of action in countries that have already developed the same to make them fully compatible with the WHO FCTC. The documents would also be helpful developing national strategies and plans of action by countries which have not yet done so.


Summary

As part of the General Obligations under Article 5 of the WHO Framework Convention on Tobacco Control (FCTC), each Party shall develop, implement and periodically update and review multisectoral national tobacco control strategies, plans of action and programmes in order to fully comply with the provisions of the Convention. In order to provide some general guidelines on how to develop these strategies and plans of action, the Regional Strategy for Tobacco Control and Regional Plan of Action for Tobacco Control were developed by the Regional Office. The Regional Strategy contains the vision and strategic plan for tobacco control in the WHO South-East Asia Region for the next five years (2006-2010). The Plan of Action was based on the Regional Strategy for Tobacco Control (2006-2010). While the Convention provides guidelines to reduce the harm from tobacco, definitive actions to control tobacco have to take place at the country level. The successful implementation of the FCTC provisions depends almost entirely on the ability of the countries. Some countries in the Region have already developed their national strategies and plans of action and others are in the process of doing so. These two documents would be helpful in revising the existing national strategies and plans of action in countries that have already developed the same to make them fully compatible with the WHO FCTC. The documents would also be helpful developing national strategies and plans of action by countries which have not yet done so.

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No abstract available


**Summary**

The manual is intended primarily for people who work in a health facility serving a 'local' population. A doctor or nurse or someone else in the health facility can use the guidelines to create changes in the communities served by them. But people outside the medical or health professions too can use these guidelines effectively. The interventions (except sections in chapter 8 on 'cessation') can be implemented by any concerned individual, and do not require special medical expertise. The manual can be used for self-instruction or for training. The activities suggested are for implementation at the level of local communities, not at national level. So the emphasis is on action relevant to a community or a clinic.


**Summary**

This profile on the implementation of the WHO Framework Convention on Tobacco Control in the South-East Asia Region provides an overview of the status of the implementation of the convention in the eleven Member States of the SEA Region. It highlights some major milestones achieved as well as the challenges faced while implementing tobacco control measures in Member countries.


3. **Tobacco economics including Interference of tobacco industry**


**Summary:**

Over the past 20 years, with the liberalization of international trade, trade in tobacco and tobacco products has rapidly expanded. This has led to a corresponding rise in tobacco consumption across low- and middle-income countries since the 1980s, and poses a major threat to global public health. This phenomenon highlights the inevitable connection between international trade agreements and the tobacco control policies enshrined in the WHO Framework Convention on Tobacco Control (FCTC). An Expert Intercountry Consultation on Tobacco and Trade was held at the WHO Regional Office for South-East Asia, New Delhi on 3-4 October 2012. A total of 31 participants from the ministries of health, trade and, agriculture and legal offices from nine Member States as well as WHO staff from WHO country offices in Bangladesh, India, Indonesia, Myanmar and Nepal attended. Recommendations for the Member States were: (1) establishing and strengthening coordination between the ministries of health and trade on policies and regulations on trade and investment relating to tobacco and tobacco
products; (2) promoting advocacy on health perspectives of international and investment agreements; (3) strengthening full implementation of the WHO FCTC; (4) mobilizing more funds for tobacco control in the Member States; (5) ensuring law enforcement and public compliance; and (6) conducting research on health cost studies and alternative livelihood for tobacco farmers. It was recommended that WHO should strengthen the capacities of Member States on health perspectives of international trade and investment agreements.


Summary

There is a fundamental and irreconcilable conflict between the interests of the tobacco industry and public health policy. On the one hand, the tobacco industry produces and promotes a product that has been scientifically proven to be highly addictive and harmful, and which exacerbates social ills, including poverty. On the other hand, governments and the public health sector try to improve the health of the population by implementing measures to reduce tobacco use. As the countries work towards developing and enforcing tobacco control measures, interference by the tobacco industry to counter these measures increases. The growing, manufacturing, distribution and selling components of the tobacco industry get involved in such interference through different means. Article 5.3 of the WHO Framework Convention on Tobacco Control and its Guidelines recommend how such interference should be addressed. Nineteen delegates from different sectors of 10 countries of the WHO South-East Asia Region attended a regional meeting on countering tobacco industry interference, from 19-21 March 2013, at the WHO Regional Office for South-East Asia, New Delhi, to analyse this issue and formulate strategies to address it. The recommendations for the Member States were to: (1) review and revise as needed, the terms of reference of the national tobacco control focal points; (2) formulate and implement, within one year, a communication strategy to raise awareness among various government and nongovernment stakeholders about tobacco industry interference and measures to counter it; (3) develop and implement a sustainable and systematic national and regional monitoring mechanism to ensure that information related to the tobacco industry is current and accurate; (4) review, and where not available, formulate a code of conduct for national officials that provides guidance on how to prevent conflicts of interest, real or perceived, between the civil service, elected officials and other national officials and the tobacco industry interests; and (5) review, and where not available, formulate rules for interaction between government and the tobacco industry, based on Guidelines for Article 5.3 of the WHO Framework Convention on Tobacco Control.


Summary

Health-care financing continues to be a contentious issue in most Member States of the WHO South-East Asia Region. While making an effort to address the concerns about health services delivery and accessibility, matters regarding mechanisms of financing and budgeting must also be taken into account. To this end, a collaborative and consultative Expert Group Meeting aiming at fostering ideas and exchanging thoughts was organized at WHO SEARO, New Delhi, India, on 13-14 June 2011. Following this meeting, the document titled Tobacco Taxation and Innovative Health-care Financing was developed. It highlights the empirical evidence and existing literature on tobacco taxation, the practices of earmarking taxes for specific projects or programmes in Member States, and innovative methods of financing health-care.


Summary

This strategy sets out the objectives and priority activities for resource mobilization for 2010-2011 to ensure effective implementation of the Strategic Action Plan for Tobacco Control in South-East Asia Region. It provides
strategic approaches and guidance on the major steps for resource mobilization highlighting the process of assessment for resource requirement and the potential for raising it; analysis of donor intelligence, building alliance and carrying out advocacy. It emphasizes on the need to diversify funding sources for sustainable financing to the programme and also on the importance of realistic programme development and management of resources.


At its annual shareholder meeting in New York on 8 May, Philip Morris International (PMI) celebrated yet another successful year selling tobacco in more than 180 markets. In 2012 the company shipped 927 billion cigarettes, and earned revenue of more than $31 billion. It applauded the fact its sales, especially from emerging markets (euphemism for developing countries), had increased from 53% in 2007 to 61% in 2012. PMI claimed it had an estimated 16.3% share of the total international cigarette market outside of the USA (see the annual report here).

The American cowboy continues to make mega profits from the developing world, even from new, small countries like Timor-Leste in Southeast Asia. Timor-Leste ranks low on the Human Development Index at 134 out of 186 countries. Its GDP is $1.6b and 50% of its population live below the poverty line, with about 40% experiencing severe poverty. About 37% of its people earn US$1.25 a day.

To add to its challenges, it has a growing smoking problem. One third of adult men smoke, while an alarming 50% of teenage boys (13-15 years) and 17% of teenage girls smoke. A pack of cigarettes cost $1.00, and a Global Youth Tobacco Survey study showed 35% of all teenagers have an object with a tobacco logo on it.

Misleading descriptors on cigarette packs have been prohibited in the US since 2006, when tobacco companies lost a case brought against them under the Racketeer Influenced and Corrupt Organizations Act (RICO). However, outside the US, PMI continues to sell cigarettes with misleading claims such as ‘fresh’ and ‘gold touch’. PMI launched Marlboro Black Menthol in Asia in 2008, including in Indonesia, Malaysia, Philippines and Japan, promoting it as a “fresh taste sensation”. In 2009 Marlboro Black Menthol brand sold four billion units in Asia. PMI claimed each new introduction has a positive impact on the vibrancy of the brand across a wide range of markets through “a very positive ‘halo’ effect on the whole brand family.”

With high male smoking prevalence, Asia is a key PMI target region; between 2007 and 2012, its market share grew from 25% to 35%. It has identified several countries as exciting growth opportunities especially Indonesia, Philippines, Vietnam, Thailand, Korea and Bangladesh. Marlboro cigarettes are positioned as a key driver of growth, together with local brands such as A-Mild in Indonesia and Fortune in the Philippines.

PMI’s strategy to introduce several brand extensions of Marlboro such as Flavour Filter Plus, Gold Touch and Fresh capsule has enabled the company to sell 179 billion extra sticks, equivalent to 6% of its sales. The WHO Framework Convention on Tobacco Control (FCTC) Article 9 calls upon countries to regulate tobacco products specifically to address these types of extensions.

With an eye on the 750 billion sticks currently sold by state-owned monopolies, PMI has slated partnerships with these as the way forward to tap into markets. In Vietnam, through a partnership with Vinataba to produce Marlboro cigarettes, PMI is already seeing increases in Marlboro sales from 0.5% in 2009 to 2.8% of total sales in 2012. Vietnam has just passed comprehensive tobacco control legislation that bans tobacco advertising and promotions and requires 50% pictorial health warnings on cigarette packs, however strict implementation is needed and all loopholes plugged to arrest increasing cigarette sales.

The tobacco industry has shown it will aggressively pursue market expansion, frequently profiting even where poverty rates are high. Its sales are increasing. However as long as the tobacco industry is viewed “like any other business” by departments of trade, it will continue to milk its status as an investor and enjoy a thriving business. The industry is using the trade platform and bilateral investment agreements to challenge governments such as Uruguay and Australia who take stringent measures like prominent health warnings and plain packaging to protect public health.

Developing countries do not have the necessary resources to defend their public health measures in expensive, prolonged arbitrations. Tobacco cannot have the privileges (Article 5.3 Guidelines) accorded to other businesses and it cannot be treated like a normal product on the trade platform.

Abstract

This paper examines the social, cultural, economic and legal dimensions of tobacco control in the South-East Asia Region in a holistic view through the review of findings from various studies on prevalence, tobacco economics, poverty alleviation, women and tobacco and tobacco control laws and regulations. Methods were Literature review of peer reviewed publications, country reports, WHO publications, and reports of national and international meetings on tobacco and findings from national level surveys and studies. Tobacco use has been a social and cultural part of the people of South-East Asia Region. Survey findings show that 30% to 60% of men and 1.8% to 15.6% of women in the Region use one or the other forms of tobacco products. The complex nature of tobacco use with both smoking and smokeless forms is a major challenge for implementing tobacco control measures. Prevalence of tobacco use is high among the poor and the illiterate. It is higher among males than females but studies show a rising trend among girls and women due to intensive marketing of tobacco products by the tobacco industry. Tobacco users spend a huge percent of their income on tobacco which deprives them and their families of proper nutrition, good education and health care. Some studies of the Region show that cost of treatment of diseases attributable to tobacco use was more than double the revenue that governments received from tobacco taxation. Another challenge the Region faces is the application of uniform tax to all forms of tobacco, which will reduce not only the availability of tobacco products in the market but also control people switching over to cheaper tobacco products. Ten out of eleven countries are Parties to the WHO Framework Convention on Tobacco Control and nine countries have tobacco control legislation. Enforcement of control measures is weak, particularly in areas such as smoke-free environments, advertisement at the point of sale and sale of tobacco to minors. Socio-cultural acceptance of tobacco use is still a major challenge in tobacco control efforts for the governments and stakeholders in the South-East Asia Region. The myth that chewing tobacco is less harmful than smoking tobacco needs to be addressed with public awareness campaigns. Advocacy on the integration of tobacco control with poverty alleviation campaigns and development programs is urgently required. Law enforcement is a critical area to be strengthened and supported by WHO and the civil society organizations working in the area of tobacco control.

PMID: 22089683 [PubMed - indexed for MEDLINE]


Abstract

For more than two decades, public health scholars and proponents have demonstrated concern about the negative effects of trade liberalisation on tobacco control policies. However, there is little theoretically-guided, empirical research across time and space that evaluates this relationship. Accordingly, we use one major region that has experienced rapid and significant recent liberalisation, Southeast Asia, and examine key tobacco control-relevant outcomes between 1999 and 2012. While we find a modest increase in regional trade in tobacco products in some countries, the effects on tobacco affordability and consumption are very mixed with no clear link to liberalisation. We argue that widespread penetration of the region by transnational tobacco firms is likely mitigating the effects of trade liberalisation. Notably, tobacco control policies have also generally improved across the region, part of which is likely the result of successful regional and global efforts by civil society, governments and intergovernmental organisations. The results suggest that scholars and public health proponents should move the focus away from narrow economic aspects of liberalisation toward specific issues that are more likely to affect tobacco control, such as intellectual property rights protections and investor–state dispute settlement.
ANNEX
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Annex


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This report is a compilation of abstracts of a few published and unpublished research studies on tobacco done from 2003 to 2014 in countries of the WHO South-East Asia Region. The purpose of creating this comprehensive database is to create a pool of information at one place for researchers to look at what has already been studied and what issues and research studies to be taken up next, and for use by public health policy advocates who may be looking for information on tobacco use pattern, impact or control in the SEA Region.

Studies are organized by subject matter like tobacco use surveillance (surveys and reports); tobacco-related mortality and morbidity information including cancers and non-cancerous diseases; tobacco control interventions including policy measures, legislations, and taxation; reports on tobacco promotion, advertising and sponsorship; and economics of the tobacco including studies on the interference of tobacco industry.

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2003–2014

(Surveillance, health effects, economics, and control efforts)