Empowering the community to fight against hypertension: the Indonesian experience

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Abstract

Untreated hypertension can cause fatal complications such as heart disease, kidney problems and stroke. However, many people do not realize that they have the disease because most of them have no symptoms. People can develop fatal heart disease and die suddenly, without knowing that they had high blood pressure. Therefore, hypertension is also known as the "silent killer". While preventing and controlling hypertension requires a comprehensive set of actions, this paper presents experiences from Indonesia in a settings-based approach to health promotion (empowerment) in three important settings – households, schools and workplaces.

At the household level, village cadres encourage family members to join physical activity groups which are regularly organized by the *Posyandu* (Integrated Health Service Post). Housewives and maids are provided information on cooking low-fat and low-salt meals, and the importance of consuming adequate fruits and vegetables daily. Some *Posyandu* also regularly identify persons with high blood pressure by doing door-to-door blood pressure measurements. Those who are identified as having high blood pressure are referred to the health centre for follow-up. In schools, volunteer students called "little doctors" supervise the school canteens and sweet sellers, provide information to other students on the hazards to their health of consuming too much fat, sugar and salt. Teachers integrate messages on the prevention and control of hypertension into their teaching materials. In workplaces, the Safety and Health Management Team of the workplace encourages workers to do light exercise between work. Doctors or other health professionals of the workplace-owned clinic or nearest health centre are appointed to regularly measure the blood pressure of the workers. A counselling service for those who want to stop smoking or improve their diet is also being provided for in some workplaces, besides regular supervision of canteens and food sellers.

Introduction

Many people do not realize that hypertension can be fatal. In fact, many people do not even know that they have hypertension, because they do not have any symptoms – no pain, dizziness or vomiting. This situation may continue for a long time, even years, until it may be too late, and their vital organs (heart, kidney, brain, among others) start malfunctioning. These organs cannot function properly because, for years, the supply of oxygen and nutrients to them has been compromised. Studies show that the higher the blood pressure, the higher the risk of the patient having cardiovascular disease, kidney failure and stroke.[1]

Increased blood pressure for a prolonged period of time hampers the functioning of the endothelium, which is the thin layer of cells that lines the inner surface of blood vessels, forming an interface between circulating blood in the lumen and the rest of the vessel wall. Endothelial

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dysfunction is a hallmark of vascular diseases, and is often regarded as a key early event in the development of atherosclerosis, a condition in which the arterial wall thickens as a result of the accumulation of fatty materials such as cholesterol. Impaired endothelial function leads to the accumulation of plaques within the walls of the coronary arteries, the vessels that supply blood to the heart. The deposition of plaque in the lumen of an artery causes it to narrow. This, in turn, obstructs the supply of oxygen and nutrients to the muscle of the heart. The disease that results is the most common cause of sudden death. That is why hypertension is known as a "silent killer".[2] According to the report of basic health research in Indonesia, the prevalence of hypertension is 31.7%.[3]

Know about blood pressure

- Blood pressure is reported using two numbers. The systolic pressure is the higher number, and denotes the maximum pressure in the artery when the heart is beating and pumping blood through the body. The diastolic pressure denotes the lowest pressure in the artery when the heart is resting between beats.
- The pressures are indicated by the height of the mercury column in the blood pressure gauge (sphygmomanometer). Therefore, standard blood pressure readings are written as the height of the mercury column in millimeters, abbreviated as "mmHg".
- According to WHO definition, a person is considered to have raised blood pressure (hypertension) when the systolic reading is either 140 mmHg or higher or the diastolic is 90 mmHg or higher.[4]

Why is it increasing?

Epidemiological evidence shows that several factors play an important role in the development, evolution and prognosis of hypertension. Some of these are non-modifiable, such as age, sex, ethnicity and heredity, while others are modifiable, such as body weight, fat and salt intake, tobacco use and insufficient physical activity. It is important to focus on the modifiable factors, as it is within our ability to control these. Besides, evidence shows that these factors are increasing.

- The worldwide prevalence of obesity or overweight has more than doubled between 1980 and 2008. In 1980, only 5% of men and 8% of women in the world were obese, while in 2008, 10% of men and 14% of women were obese. This means that in 2008, more than half a billion adults worldwide were obese.[5]
- In the absence of comparable data on individual dietary intake around the world, WHO indicates that there are large variations across WHO regions in the amount of total fats available for human consumption. The highest quantity available is in the European Region, while the lowest is in the South-East Asia Region. The availability of total fat correlates with income level, while the availability of saturated fats clusters at around 8% in low- and lower–middle-income countries, and around 10% in upper–middle- and high-income countries.
- The amount of salt intake is an important determinant of blood pressure level. For the prevention of cardiovascular disease, WHO recommends a salt intake of less than 5 g per person per day. However, current global levels of dietary salt intake are 9–12 g per person per day.[4]

- According to WHO, nearly 80% of the world's one billion smokers live in low- and middle-income countries. Consumption of tobacco products is increasing globally, though it is decreasing in some high-income and upper–middle-income countries.[4]
- Globally, around 31% of adults aged 15 years and above were not sufficiently active in 2008 (men 28% and women 34%). Approximately 3.2 million deaths each year are attributable to insufficient physical activity.[4]

As these risk factors are related to lifestyles determined by the sociocultural milieu at the community level, any attempt to modify them requires action at the community level.

Community empowerment

One of the five elements of primary health care is to increase the participation of stakeholders in health, especially the community. Evidence shows that this can be done effectively by empowering the community. Empowering the community means providing suitable and adequate information to the community to modify their attitudes, guide them to act, and facilitate behaviour change through health promotion. Empowerment enables the community to solve their health problems independently, using their own resources and capacity. Thus, investing in empowerment results in sustainable community participation in health development. The activities to be implemented by the community for the prevention and control of hypertension include: (1) identifying subjects with hypertension by measuring blood pressure; (2) controlling hypertension by managing the risk factors and treating the disease; and (3) preventing the development of hypertension by promoting healthy lifestyles.

In Indonesia, the prevention and control of hypertension is done through the implementation of the Clean and Healthy Life Behaviour Movement *(Gerakan Perilaku Hidup Bersih dan Sehat),* which follows a settings-based approach to health promotion. The movement was started by the Ministry of Health in 1996, and was re-emphasized in 2011 by the enactment of the Health Ministerial Regulation No. 2269/2011 on *Guideline for the development of clean and healthy life behaviour (Pedoman Pembinaan Perilaku Hidup Bersih dan Sehat)*.[6]

Taking a settings-based approach to health promotion means addressing the contexts within which people live, work and play, and making these the object of inquiry and intervention, as well as identifying the needs and capacities of people found in different settings.[7] This approach increases the likelihood of success because it offers opportunities to position practice in the relevant context. People in the settings can optimize interventions for specific contextual contingencies, target crucial factors that influence behaviour in the organizational context, and render the settings themselves more health promoting.

According to the *Guideline for the development of clean and healthy life behaviour*, there are five settings in which clean and healthy life behaviour should be implemented: (1) households; (2) schools; (3) workplaces; (4) public places; and (5) health services. This paper focuses on community empowerment for the prevention and control of hypertension in three important settings that are often neglected, i.e. households, schools and workplaces, based on experiences gathered from some areas in Indonesia.

Households

In Indonesia, almost all villages have community-based primary health services, especially the one called *Pos Pelayanan Terpadu* or *Posyandu* (Integrated Health Service Post). The *Posyandu*, supported by the nearest health centre, provides basic health services such as maternal and child health, family planning, immunization, nutrition and health promotion. The services are provided by village cadres who are mostly local women, members of the *Pembinaan Kesejahteraan Keluarga* or *PKK* (Family Welfare Movement).[8]

With regard to hypertension, village cadres encourage family members to join physical activity groups, which are regularly organized by the *Posyandu*. The sessions are conducted every morning, one hour before the family members start their daily activities (go to work or school) in a village square or any open area. On working days, participation in the sessions may be minimal, but increases considerably during the weekends. Very often, the weekend sessions are followed by family bike rides along the village roads. While these activities increase physical activity among those who participate, they also serve as a reminder to those who do not join in.

The second effort that village cadres make to prevent and control hypertension is provide information to housewives and maids on how to prepare low-fat and low-salt meals, and how important it is to consume adequate amounts of fruits and vegetables every day. As men are not at home during the day, the village cadres can provide information only to housewives on the hazards of smoking and the effect of tobacco smoke on non-smokers (passive smoke). Stickers on the hazards of smoking and the call to stop smoking are also distributed to them to be posted on the walls of their houses. These efforts create a "social pressure" on smokers to stop smoking. Due to the difficulty in finding counsellors, only a few *Posyandu* provide tobacco cessation counselling services. Some *Posyandu* also regularly identify persons with high blood pressure by doing door-to-door blood pressure measurements. Those who are identified as having high blood pressure are referred to the health centre for follow-up.

These empowerment activities are conducted by village cadres through counselling and discussions during *Posyandu* and home visits, and by inserting some messages in the speeches and/or discussions in village gatherings, youth meetings, Family Welfare Movement meetings, religious teachings, etc. Village cadres also actively advocate with village leaders (formal and informal) to support the prevention and control of hypertension by providing the *Posyandu* with necessary facilities such as blood pressure monitors, restricting people from smoking in public places and, most importantly, being role models by practising healthy behaviour.

Community empowerment at the village level is being strengthened with the introduction of the *Posbindu PTM* (Integrated NCD Post) by the Ministry of Health. To start a more specific empowerment programme to prevent and control hypertension, a memorandum of understanding has been signed between the Indonesian Society of Hypertension and the Ministry of Health. The Post will provide services for early detection and monitoring of the risk factors for major noncommunicable diseases (NCDs) such as diabetes, cancer, cardiovascular diseases, chronic obstructive pulmonary disease), health counselling and referral of patients to the nearest health centre.[9]

Schools

In Indonesia, the school health programme has been in place for a long time, and almost every school has a School Health Team consisting of some teachers and representatives of students.

Almost all schools have school health cadres called *dokter kecil* (little doctors), i.e. some students who do voluntary work for the school health programme. Under the guidance of the nearest health centre, the School Health Team and the little doctors conduct activities to maintain the health of all schoolchildren as well as a healthy school environment. They also conduct health promotion activities to create and maintain healthy behaviour among the children.[8]

The most important activity to prevent and control hypertension is to supervise the school canteen and/or sweets sellers so that they do not sell food and drinks that contain excessive fat, sugar and salt. Information to students on the hazards to their health of consuming too much fat, sugar and salt is provided by putting up posters, displaying banners and/or conducting extra-curricular discussions.

The school principals are encouraged to declare their schools as "tobacco-free schools". The School Health Teams and the little doctors ensure that the regulations established by the school principals are complied with. Teachers integrate messages on the prevention and control of hypertension into their teaching materials. Sports teachers are strategically placed to prevent and control hypertension. They help students practise sports by bringing them to the school playground and guiding them to play badminton, table tennis, basketball, volley ball, soccer and other games.

The success of school-based programmes depends on the role played by the School Health Teams, including school managements, by providing supportive policies and facilities such as a canteen that provides healthy food, sports facilities, among others. Teachers are role models for their students by adopting healthy behaviours such as eating healthy foods and avoiding smoking, and students emulate these behaviours.

Workplaces

Healthy workplaces in Indonesia are developed through the *Sistem Manajemen Keselamatan dan Kesehatan Kerja* or *SMK3* (Safety and Health Management System).[10] Empowerment of workers in every workplace is the responsibility of the Safety and Health Management Team of the respective workplace. This team consists of representatives from both the management and the workers' union.

In workplaces that do not require much physical activity such as offices, the most important thing is to encourage workers to do light exercises between work. For instance, after working for every two hours, workers do light exercises for about five to ten minutes before starting work again. With this routine, the workers not only refresh their minds but also have a chance to do physical activities for at least half an hour every day.

At some workplaces, doctors or other health professionals of the workplace-owned clinic or nearest health centre are appointed to regularly measure the blood pressure of the workers. Those who are identified as having hypertension are referred to the clinic or health centre for follow up. By doing this, the management can prevent losses in productivity due to workers' sickness or death, while encouraging them to be aware of their blood pressure.

As in schools, the Safety and Health Management Team can advocate with the management or owner to provide sports facilities. After working hours, workers can play badminton, table tennis, basketball, volley ball, soccer, etc. Wherever possible, the Team also encourages and organizes a bike-to-work programme. Smoking is prohibited in almost all workplaces in Indonesia. However, many workers have problems with quitting smoking. Therefore, counselling services for those who want to stop smoking are provided in some workplaces, by hiring outside experts on a contractual basis. Due to the difficulty in finding counsellors, only a few workplaces can provide this service.

The Safety and Health Management Team ensures that the drinks and food provided or sold in the canteen or by food sellers are low in fat, sugar and salt. Workers are also adequately informed about the effects of consuming too much fat, sugar and salt on hypertension and its complications, so that they can understand the need for regulating the canteen and/or food sellers. This is done through distributing leaflets, displaying posters and banners, and/or conducting special talks and discussions, including some by invited experts. For successful prevention and control of hypertension in the workplace, the Safety and Health Management Teams should work hard to advocate with managements, owners and other decision-makers to support their efforts by providing policies and needed facilities.

Monitoring and Evaluation

To ensure the sustainability of these activities, a monitoring and evaluation system should be in place. In Indonesia, data recording at the village level is done by the *Posbindu* using an "NCD Health Card" *(Kartu Menuju Sehat PTM)* and "*Posbindu* Activities Record Book" *(Buku Pencatatan Kegiatan Posbindu)*. The NCD Health Card is an individual patient card to record the condition of a patient's risk factors for NCDs such as blood pressure, blood glucose, body mass index, etc. It is kept by the patient and must be brought when he/she visits the *Posbindu*. It is a good tool for patients to monitor their own risk status and for cadres to give advice on how to maintain their health. The *Posbindu* Activities Record Book is used by cadres to map the health of the community and trace specific cases for follow up, because this book contains the details of every patient such as name, age, address, education, etc. The book is also used to plan activities of the *Posbindu*. Similar monitoring tools and strategies need to be developed for schools and workplaces. This information should be compiled and reported on a regular basis to the higher levels for effective monitoring of activities. Evaluation helps to assess the outcome of the activities which, in this case, are changes in the behaviour of the community in all settings and a decrease in the prevalence of hypertension. In Indonesia, evaluation is integrated into the Basic Health Survey conducted every three years by the Ministry of Health, in collaboration with all provincial and district health offices.

Conclusion

Hypertension is a dangerous disease that is often neglected, as it has no symptoms. The risk factors include tobacco use, unhealthy diet and lack of physical activity. It is important to empower the community to fight against this "silent killer". As people live in different settings, taking a settings-based approach to health promotion is recommended for successful empowerment of the community.

In Indonesia, initiatives to empower the community to fight against hypertension are integrated into the Clean and Healthy Life Behaviour Movement. The introduction of *Posbindu PTM* (Integrated NCD Post) by the Ministry of Health can become a good starting point. Similarly, a health promotional framework exists in workplaces and schools, which can be used to strengthen anti-hypertension activities. The success of such programmes depends largely on the support provided by the school or workplace management. Monitoring can be done through a system of creating and maintaining records and reporting formats, while evaluation can be done by conducting national surveys that are integrated into the existing national surveillance system.

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