

4 RESULTS

4.1 Profile of Enumerated Population

Tables 1 to 3 provide the characteristics of the enumerated population. A total of 28 507 individuals were enumerated during the survey. The family size was larger in the rural and slum population as compared to the town and urban population. Table 1 gives the enumerated population by area of residence and by sex. The overall sex ratio was 938 females for every 1000 males. The age-sex distribution is given in Table 2. The 'bulging' middle of the age pyramid is quite evident from the table.

Table 1: Distribution of the enumerated population by area of residence and sex

Area	Total (%)	Males (%)	Females (%)
Rural (n = 9016)	31.6	52.4	47.6
Town (n = 7460)	26.2	52.0	48.0
Slum (n = 9033)	31.7	50.7	49.3
Urban (n = 2998)	10.5	50.7	49.3
Total (n = 28 507)	100.0	51.6	48.4

Table 2: Age-sex distribution of the enumerated population

Age (yrs)	Male (%) (n = 14 709)	Female (%) (n = 13 798)	Total (%) (n = 28 507)
1-15	23.7	25.2	24.4
16-20	11.2	12.4	11.8
21-25	11.0	12.1	11.5
26-30	11.8	11.9	11.8
31-36	9.1	8.6	8.8
36-40	9.0	9.5	9.3
41-45	7.1	6.3	6.7
46-50	5.9	5.1	5.5
51-55	3.8	2.8	3.3
56-60	3.8	2.7	3.3
60+	3.7	3.5	3.6
Total	100.0	100.0	100.0

The educational status of the enumerated population is given in Table 3. The overall literacy rate was 79% and ranged between 72% in rural areas to a high of 92% in urban areas. It was heartening to note that on an average, nearly “one fourth” of the study population had completed their high school education. Across the areas it was observed that there was a gradual shift towards a higher educational status as one moved from rural to town to urban areas. Slum populations had characteristics intermediate between town and urban areas.

Overall, being a housewife or student was the commonest occupation of the sample and was similar across the different areas. The greater number of professionals and semi-professionals in the rural area was primarily due to farmers being included as semi-professionals as per the occupational classification followed in the study. While skilled workmanship and being professionals were most common in town and urban areas, 36% of the slum population were skilled workmen.

Nearly 52% of the study population were married. The proportion of unmarried persons ranged from 39% in rural area, 45% in urban areas and 47% in the slum population. The drinking pattern should be seen in the context of the greater proportion of unmarried population in the slum and urban areas.

The total mean monthly income in Rs was 3728, 5276, 4525 and 6937 in the rural, town, slum and urban population. The total monthly income was tabulated with respect to the poverty line of the Government of India. Nearly 40% of the study population reported that they lived below the poverty line. The greater affluence in the urban areas and the greater numbers just above poverty lines in the rural areas is noteworthy.

4.2 Prevalence of Alcohol Use

Table 4 shows the reported habits of alcohol use among the four different areas and among males and females in the enumerated population. In the last one year 13% of the study population (including all categories of users), reported use of alcohol. It is surprising to note that a relatively greater proportion of the town, slum and urban population have consumed alcohol at least once in the last one year as compared to the rural population, except among women (1.8%). Incidentally, tobacco usage was reported by 11% of the respondents.

Alcohol consumption is predominantly a male phenomenon and nearly one fourth (23.7%) of the total study population has reported to have consumed alcohol in the last one year as against 1.5% among females. Further, the proportion of men consuming alcohol increases to 32.6%,

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Table 3: Education status, occupation status, marital status and total family income by area of residence of the enumerated population

	Rural (%)	Town (%)	Slum (%)	Urban (%)	Total (%)
n	9016	7460	9033	2998	28 507
Education					
Illiterate	28.0	19.9	18.8	8.4	20.9
Primary	14.1	16.1	17.3	13.2	15.6
Secondary	15.6	17.2	18.7	13.5	16.8
High school	24.2	25.5	30.3	35.0	27.6
Pre-university	6.2	6.3	4.4	11.5	6.2
Vocational	1.6	2.3	1.1	2.5	1.7
Graduate	3.6	5.2	1.4	6.4	3.6
Postgraduate / Professional	0.9	1.7	0.2	1.5	1.0
Not known	0.9	1.0	0.8	1.3	0.9
Not applicable	5.1	4.7	6.9	6.6	5.7
Total	100.0	100.0	100.0	100.0	100.0
Occupation					
Professional / Semi-professional	22.3	12.0	2.3	10.6	12.1
Skilled worker	10.2	18.4	36.2	21.7	21.7
Semi-skilled worker	6.4	1.6	1.9	2.3	3.3
Unskilled worker	6.4	1.6	1.9	2.3	3.3
Unemployed	2.4	1.8	2.1	2.0	2.1
Retired	3.5	2.7	3.0	3.1	3.1
Housewife	25.4	27.3	18.1	28.1	23.9
Students	21.0	21.7	23.7	24.3	22.3
Others	1.6	1.8	1.7	3.0	1.8
Total	100.0	100.0	100.0	100.0	100.0
Marital status					
Married	55.4	56	47.0	50.3	52.4
Unmarried	39.2	39.4	46.8	45.1	42.3
Others	5.4	4.6	6.2	4.6	5.3
Total	100.0	100.0	100.0	100.0	100.0
Total family income (Rs)					
Less than 3000	27.1	36.7	49.7	44.1	38.5
3001–6000	60.0	39.2	32.4	11.0	40.6
More than 6000	12.9	24.1	18.0	45.0	20.8
Total	100.0	100.0	100.0	100.0	100.0
Note: Education: Not applicable are those below 7 years of age. Occupation: Not applicable (1706) have been excluded for analysis (516 in Rural, 356 in Town, 635 in Slum and 199 in Urban). Marital Status: Others include widowed, divorced, separated and not known.					

Table 4: Reported alcohol use among the enumerated population in four representative areas, Bangalore, India			
	Area	Enumerated population	Alcohol-users (%)
Males	Town	3 882	28.1
	Urban	1 520	24.5
	Slum	4 584	22.6
	Rural	4 723	21.1
	Total	14 709	23.7
Females	Town	3 579	2.3
	Urban	1 477	0.5
	Slum	4 449	1.0
	Rural	4 293	1.8
	Total	13 798	1.5
Both sexes	Town	7 461	15.7
	Urban	2 997	12.7
	Slum	9 033	12.0
	Rural	9 016	11.9
	Total	28 507	13.0*

* 13% of the enumerated population were alcohol-users (n = 3706), there being more than one user in some households. In such cases one user was selected as described in the methods section. All calculations are based on 3258 users among the respondents.

if the age category is restricted to 16 to 60 years. This proportion varies between a low of 29.1% in rural areas to a high of 38.7% in the town sample. It was indeed astonishing to note that in the slum population the reported use (31.1%) featured as third after urban dwellers (33.8%). Thus, it can be said that one third of the adult male population across the four areas have used alcohol in a one year period.

It is surprising that a greater proportion of females have consumed alcohol in the last one year among the town respondents (2.3%) and rural respondents (1.8%). The smaller proportion of urban women alcohol-users (0.5%) thus seems quite disproportionate to the actual problem which is commonly observed in urban areas such as Bangalore. The relatively low proportion may be due to the fact that the sampled urban area is a conservative middle class locality.

At the national level, the United Nations Office on Drugs and Crime and the Ministry of Social Justice and Empowerment, Government of India, have recently reported the extent, pattern and trends of drug abuse in India, including alcohol, for the year 2004. Triangulating the different methodologies, the study has attempted to provide a realistic picture of extent, pattern and trends of drug abuse across the country. By a

country-wide, two-stage stratified random sample based on probability proportional to size, the National Household Survey reported the current one-month period use for alcohol to be 21.4% among men in 16+ years giving a crude prevalence of 60/1000. Of the total alcohol-users, 17%, were classified as dependent users based on ICD 10 (Ray, 2004). The National Health and Family Survey 1998–99 has reported an overall prevalence of 9.6%. The proportions of those who have reported consuming alcohol in rural areas is nearly double that of urban areas. Nearly a third to a fourth of the illiterate population reportedly consume alcohol. The proportion of females consuming alcohol varied between 10–20%; of the proportions among males. Among those over 25 years of age it ranged from 17–29% (NFHS–2, 2001). Anand et al., (2000), estimating the burden due to alcohol in the country, considered it as the 'numero uno' among all non-communicable disorders.

Studies from NIMHANS, Bangalore, have estimated the prevalence of alcohol use at the household level and at the individual level. In the study on health behaviours, Gururaj et al., (2004d) observed that the prevalence rate of habitual alcohol use among the 15 to 55 year-olds was 90/1000 population. Group interaction revealed the magnitude of the problem to be much larger. The groups of men were of the opinion that nearly 60% among the youth consume alcohol and the initiation of use of alcohol was felt to be occurring at a younger age. Alcohol-related psychiatric problems have been documented in psychiatric morbidity surveys in general populations and also in specific populations. The prevalence of alcoholism has varied between 13/1000 to 14/1000 (Gururaj, 2004a). The head of household survey undertaken by Mohan, D et al., (1992) in Delhi reported that 26% of residents in urban slums were substance abusers, the majority involving alcohol. Specific population surveys of alcohol use have been carried out among school students, industrial workers, medical personnel, etc. The rates ranged between 10 and 66% (Gururaj, 2005a).

A WHO collaborative study on unrecorded consumption of alcohol, conducted on 15 000 households throughout the state of Karnataka, estimated the prevalence of alcohol use as 30% of all adult males in the state and about 1% of all adult females (Benegal, 2003). If one considers the fact that in many communities consumption of locally brewed alcohol is a tradition and a way of life, the reported abstention may be with respect to only alcohol that is purchased. Despite this high reported rate of abstention, it is vital to consider the detrimental effects of alcohol consumption by those who do not abstain and their impact on the abstainers. Commenting on the consideration of India being a traditionally 'dry' or 'abstaining' culture, Benegal (2005), traces

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this construct to be of relatively recent origin, led by the process of *sankritisation* of the emerging urban Indian middle class who were a collective part of the 19th century rapid industrialization, as also the result of the nationalist movement which championed the cause of prohibition as a reaction to the perceived colonial imposition of alcohol-related problems in the country.

4.3 Socio-Demographic Characteristics

The details of the study population in terms of age, sex, education, occupation, marital status and total family income are given in Table 5.

It can be noted that nearly two thirds of the users (67.4%) are in the age group of 26 to 45 years. Surprisingly the proportion of users in the age group of 16 to 20 years is almost similar in the rural and town population and it is nearly double that found in the slum and urban populations. This finding is of great relevance as the younger the age of initiation into the habit of alcohol use, the more hazardous it would turn out to be later in life. The alcohol-user population has an overall lower educational status in comparison to the non-user population. This finding is similar across the four areas. It can be noted that nearly two thirds of the users (67.4%) are in the age group of 26 to 45 years.

Table 5: Socio-demographic co-relates of alcohol-users and non-users

	Non-users					Users				
	Rural	Slum	Town	Urban	Total	Rural	Slum	Town	Urban	Total
n	1080	1288	990	387	3745	952	924	1036	346	3258
Age (yrs)	%	%	%	%	%	%	%	%	%	%
16–20	6.8	8.4	6.4	5.8	7.0	2.5	1.1	2.3	1.7	1.9
21–25	9.4	11.9	10.3	10.6	10.6	8.1	7.4	6.2	6.4	7.2
26–30	15.7	20.7	17.0	18.0	17.8	15.8	16.7	13.6	19.2	15.8
31–35	16.5	16.5	17.3	16.4	16.8	15.9	18.0	16.7	18.7	17.1
36–40	15.6	15.7	16.6	14.8	15.8	19.3	19.1	19.7	17.5	19.2
41–45	13.5	11.8	13.2	10.1	12.6	16.2	14.1	16.8	12.0	15.3
46–50	11.2	8.1	10.0	11.9	10.0	9.3	10.1	13.1	11.1	10.8
51–55	3.9	4.5	4.5	6.6	4.6	5.3	7.1	7.4	8.7	6.8
56–60	7.4	2.3	4.6	5.8	4.9	7.6	6.3	4.2	4.7	5.9
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Sex										
Male	93.3	94.3	93.6	95.5	93.9	93.4	94.0	94.3	99.7	94.5
Female	6.7	5.7	6.4	4.5	6.1	6.6	6.0	5.7	0.3	5.5
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

(continued...)

Table 5: Socio-demographic co-relates of alcohol-users and non-users (...continued)										
	Non-users					Users				
	Rural	Slum	Town	Urban	Total	Rural	Slum	Town	Urban	Total
Education										
Illiterate	28.9	16.4	17.7	5.8	19.3	43.2	24.8	28.8	8.2	29.6
Primary	11.0	11.2	8.6	3.7	9.5	14.4	14.4	12.0	6.1	12.8
Secondary	15.0	18.1	14.8	10.3	15.4	13.6	21.0	16.5	14.6	16.8
High school	25.8	43.2	27.2	41.3	33.0	19.3	34.5	24.5	45.2	28.4
Pre-University	8.8	6.2	9.4	17.2	9.1	4.1	3.3	5.1	12.8	5.1
Vocational	2.6	2.1	5.5	5.8	3.7	2.2	0.7	1.7	3.2	1.7
Graduate	6.5	2.4	13.1	12.4	8.0	2.7	1.2	9.2	9.0	4.7
Post graduate	0.7	0.2	1.7	0.5	0.8	0.2	0.0	1.0	0.3	0.4
Professional	0.8	0.3	2.1	2.9	1.2	0.2	0.1	1.2	0.6	0.5
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Occupation										
Professional / Semi-professional	53.7	5.7	35.6	33.6	31.8	40.7	4.0	27.2	23.9	23.4
Skilled worker	20.2	60.9	35.6	43.1	39.4	20.7	58.4	37.3	53.6	40.8
Unskilled worker	7.4	20.6	15.1	6.1	13.6	19.4	26.8	25.4	11.7	22.6
Unemployed	1.3	1.5	1.7	1.3	1.5	0.9	1.2	0.4	0.6	0.8
Retired	1.9	1.0	1.8	3.7	1.8	1.4	3.2	1.8	2.3	2.2
Housewife	3.3	1.5	2.5	2.6	2.5	2.0	1.5	1.9	0.3	1.6
Students	3.5	1.9	3.1	2.9	2.8	0.3	0.2	0.4	0.3	0.3
Others/ Not known	1.4	2.0	2.2	1.9	1.9	0.8	1.1	1.7	2.9	1.4
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Marital status										
Married	80.3	77.0	81.6	79.9	79.7	87.3	90.4	90.6	88.3	89.3
Unmarried	17.3	20.3	16.3	19.0	18.0	10.5	7.2	7.2	11.1	8.6
Others	2.4	2.7	2.1	1.1	2.3	2.2	2.4	2.1	0.6	2.0
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Total monthly income of the family (Rs)										
Less than 3000	24.1	47.8	32.2	46.5	35.9	24.2	51.8	34.8	47.8	38.5
3001–6000	65.0	38.8	42.3	10.9	44.6	69.5	34.4	42.5	14.9	44.9
Greater than 6000	10.9	13.4	25.5	42.6	19.5	6.3	13.8	22.7	37.3	16.6
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

The user population includes a greater proportion of unskilled workers and is nearly double in rural and urban areas. The nearly constant 0.3% of users who have reported their occupation to be students is indeed noteworthy. This subgroup of the study population needs to be explored in detail. The incidental finding of a greater proportion of users being

married needs to be viewed with caution due to the small numbers within the cells.

The total family income levels are comparable across the four areas. Between the users and non-users in the slum (52% v/s 48%) and urban (48% v/s 47%) areas, a greater proportion of users report to be below the poverty line. Overall a greater proportion of the users have reported to be below the poverty line (39% v/s 36%).

4.4 Pattern of Alcohol Use

It is increasingly being recognized that alcohol-related harm is unrelated to addiction but is related to intoxication, the pattern(s) of drinking and other physiological processes triggered by alcohol use (Rehm, 2003). This realization is more important rather than just considering the addiction status of an alcohol-user.

4.4.1 Duration, frequency and type of alcohol use

Table 6 shows the pattern of alcohol use among the study population by study area.

Duration of alcohol consumption: It is evident from Table 6 that nearly three fourths (72.1%) of the users have been consuming alcohol for more than 5 years. Across the different areas 81.1–85.1% of the respondents have been consuming alcohol for four or more years. Approximately 5% of the study population has recently started using alcohol (within 1 or 2 years) with a lesser proportion among slum-dwellers. The relatively greater proportion of urban users (12.7%) with duration of alcohol use of 1 to 3 years is a pointer to the emerging habitual use of alcohol. This needs to be explored further.

Frequency of alcohol consumption: Individuals were defined as alcohol-user if they consumed any alcoholic drink in the last 12 months. As per this definition, it was observed that more than a third of the study population were regular alcohol-users (every day or nearly every day or three or four times a week). Nearly 50% of the study population reported that they consumed alcohol frequently (once or twice a week or one to three times in a month), a greater proportion being among the slum population. Infrequent users constituted 12.2% of the study population (3 to 11 times in the last 12 months). The commonest pattern of consumption of alcohol in towns, slums and urban areas was once or twice a week, whereas in rural areas it was every day/nearly every day. In addition, among those reporting non-use of alcohol during the first contact, about 1%, especially those in the rural areas, reported that they were 'rare'

It is increasingly being recognized that alcohol-related harm is unrelated to addiction but is related to pattern(s) of drinking.

Nearly three fourths (72.1%) of the users have been consuming alcohol for more than 5 years.

users of alcohol (once or twice in the last 12 months), possibly due to the sudden, free and excess availability of alcohol prior to, during and immediately after the general election (also the time of data collection).

Type of alcohol consumed: 'Hard' liquor like whisky and *arrack* was the first choice for the type of alcohol consumed by about 80% of the population. Beer and brandy contribute to about 13% of the type of alcohol of first choice. Local illicit brewed alcohol is consumed by a mere

'Hard' liquor like whisky and *arrack* was the first choice in type of alcohol consumed by about 80% of the population.

Table 6: Pattern of alcohol use

Pattern of alcohol use	Rural	Town	Slum	Urban	Total
n	952	924	1036	346	3258
Duration	%	%	%	%	%
Less than 6 months	0.5	0.4	0.2	0.0	0.3
6–12 months	1.4	1.4	1.1	1.2	1.3
1–2 years	3.8	3.2	2.3	4.0	3.2
2–3 years	5.7	6.2	6.6	8.7	6.4
3–4 years	3.5	2.8	5.4	5.2	4.1
4–5 years	11.7	9.8	11.5	13.3	11.2
> 5 years	70.3	75.3	73.1	67.8	72.1
Total	100.0	100.0	100.0	100.0	100.0
Frequency					
Every day / nearly every day	29.8	22.6	16.8	5.5	21.1
Once or twice a week	23.7	32.8	39.1	39.6	32.9
Three or four times a week	14.5	12.4	20.0	9.5	15.1
1–3 times per month	14.9	19.0	16.3	24.6	17.6
7–11 times in last 12 months	7.5	6.2	4.0	11.8	6.4
3–6 times in last 12 months	6.7	6.2	3.8	8.7	5.8
Twice in last 12 months	2.6	0.8	0.1	0.3	1.0
Once in last 12 months	0.2	0.0	0.0	0.0	0.1
Total	100.0	100.0	100.0	100.0	100.0
Type					
Brandy	4.3	1.8	6.0	4.0	4.1
Whisky	31.4	54.1	48.6	61.0	46.4
Rum	4.9	2.9	5.8	8.1	5.0
Arrack	50.3	33.5	28.6	5.8	33.9
Illicit brew	0.9	0.1	0.0	0.0	0.3
Beer	4.9	6.6	11.0	21.1	9.1
Other*	3.1	0.8	0.1	0.0	1.2
Total	100.0	100.0	100.0	100.0	100.0

* Other includes *Neera* and those mixing their drinks

Discarded arrack sachets after use



0.3% of the population. It was also observed that a very low percentage (0.2%) mixed their drinks and 1% consumed *Neera*. Area-wise differences were also observed in terms of the 'preferred' drink; while the urban, slum and town population opted for whisky, the rural population preferred *arrack*. The choice of the type of alcohol, its availability and its relation to lifestyle perceptions is further corroborated when it is observed that beer is the preferred drink among urban-dwellers (21%) as also among a good number of slum-dwellers (11%). Nearly 1.0% of the rural population reported consuming illicit brew (probably under-reported).

Despite the fact that the type of beverage most often consumed is spirit, a noticeable trend in India is the appearance of wines and beer in the spectrum of alcohol use especially during the late eighties and early nineties (WHO, 2004a) and the last two years have seen a steady 20% growth in wine sales. This corresponds to the immense socio-political and economic changes which India is undergoing. Commenting on the consumption of beer in India, Benegal observes that even though it constitutes less than 5% of total alcohol consumption, 70% of beer sales are dominated by strong beers at strengths over 8% v/v (Benegal, 2005). Rahman observes that rural households with the head of household being illiterate consume more of *arrack* (Rahman, 2003).

As a result of the triple process of centuries of colonization, decades of industrialization and the recent globalization, alongwith the consequent liquor control policies, the illicit brewing industry has also seen its highs and lows. Most often these clandestine cottage industry preparations are made in an unhygienic environment; the additives to the deadly brew contribute to the hazard.

Hazardous illicit brewing (Rural area outside Bangalore, India)

A variety of *kalla bhatti* that the team was able to procure, came in a 180 ml. bottle. The place of manufacture was a shed in the village itself. The raw materials used were jaggery, wood apple, waste fruit and *nau-sadar* (sal ammoniac). Other additives consisted of shells of batteries. Unconfirmed reports by consumers described other additives such as rubber slippers, lizards and other decomposing matter being added. Informants recalled that while many years back, the manufacture was restricted to families belonging to a traditional caste of brewers, in recent times the business had been taken over by non-specific networks with considerable muscle power and alleged contacts with the powers to be.

Source: Benegal V et al. (2003)

The pattern of drinking in rural areas is usually “binge drinking”, centred around pay-day or special occasions, such as marriages and festivals. Another special occasion in democratic India is the parliamentary elections.

4.4.2 Unrecorded consumption

The often quoted per capita consumption figures do not give the true picture of alcohol consumption in some communities. This is mainly because parallel with the distilled and more expensive beverages, which usually constitute the recorded consumption, in India there are local and cheap beverages, either legal or illegal, which are not computed into national statistics. Thus, a substantial amount of alcohol consumed is unrecorded, i.e., it does not form a part of the official data. Unrecorded consumption includes a wide range of local beverages and home brews, alcohol brought into the country by citizens and tourists besides that which is smuggled into the country. These can contribute substantially to the total available alcohol in a country. As a proportion of total consumption, unrecorded alcohol consumption is estimated to be more than two thirds in India. Therefore, actual Adult Per capita Consumption (APC) would be much higher than what is officially reported. With a large majority of abstaining population (women and children), the amount of alcohol consumed by the ones who drink can reach very high levels. Benegal (2005) recalculated the APC for India for the year 2003 from the official sales and population figures and estimates it to be 2 litres/adult/year. After allowing for unrecorded consumption (illicit beverages as well as tax-evaded products), which accounts for 45–50% of total consumption, this is likely to be around 4 litres/adult/year.

The per capita consumption figures do not give the true picture of alcohol consumption because local alcoholic beverages, either legal or illegal, are not computed into national statistics.

Among those who consume alcohol, the spectrum of use can range from one-time use, occasional use, regular use, hazardous use, harmful use to dependence.

What is beginning to emerge is a profile of the numerous problems associated even with occasional use of alcohol.

4.4.3 Hazardous and harmful drinking

There is a spectrum of use among those who consume alcohol, which can range from (referred to as alcohol abuse by some experts in some countries) to dependence. The proportion of people in different groups of this spectrum varies considerably among different societies and there are differences even within each individual country.

The permissiveness of occasional use varies across societies and cultures. For example, in some communities serving alcohol to guests on joyous occasions and festivals is a common practice. What is beginning to emerge are the numerous problems associated with even occasional use of alcohol. These range from domestic and family violence to road, or other occupational accidents to physical or mental health damage. These and other such problems in the absence of dependent use are grouped as “alcohol-related problems”. The recognition and acceptance

Spectrum of alcohol use

Harmful use

A pattern of alcohol use that is causing damage to health. The damage may be physical (as in cases of hepatitis from prolonged use of alcohol) or mental (e.g. episodes of depressive disorder secondary to heavy consumption of alcohol).

Source: Adapted from WHO (2003)

Hazardous use

Hazardous use is a pattern of alcohol consumption carrying with it a risk of harmful consequences to the drinker. The damage may be to health—physical, or mental, or they may include social consequences to the drinker or others. In assessing the extent of risk, the pattern of use, as well as other factors such as family history, should be taken into account.

Source: Adapted from Babor and Higgins-Biddle (2001)

Dependence syndrome

A cluster of behavioural, cognitive, and physiological phenomena that develop after repeated alcohol use and that typically include a strong desire, difficulties in controlling its use, persisting in its use despite harmful consequences, a higher priority given to alcohol use than to other activities and obligations, increased tolerance, and sometimes a physical withdrawal state.

Source: Adapted from Benegal V et al. (2001)

of the “alcohol-related problems” group as a “problem” is associated with the definition of a social drinker and general attitudes of the particular community or society towards alcohol use. This implies that certain communities may be more tolerant to excess alcohol consumption and ignore the ‘transient problems’ related to alcohol use, whereas other communities may be intolerant. For example, in certain communities, verbal abuse of the wife by her husband who is under the influence of alcohol is tolerated as a culturally accepted phenomenon.

“Harmful use” of alcohol refers to a pattern of use which leads to adverse social, occupational, medical and public health consequences. “Harmful use” is not necessarily a result of daily consumption of alcohol. Harm from alcohol use could also be due to drinking too much alcohol at one time. Other patterns of consumption, such as consumption of alcohol by pregnant women, would also qualify under the term “harmful use” in a broad sense.

Hazardous consumption of alcohol can be either “binge drinking” (for this study defined as consumption of four or more drinks in one sitting or on one occasion) or pathological drinking (unable to stop drinking once started). Heavy “binge drinking” can result in alcohol poisoning and subsequent death.

The conditions of dependence and harmful use of alcohol are grouped as “Alcohol Use Disorders”. The problems in the personal, family and social sphere of the alcohol-dependent person are well-documented.

In addition to the health risks due to toxicity of alcohol, intoxication stops one from thinking clearly and acting sensibly. It puts the person and also others at risk of harm from other adverse effects: for example, injury due to falls, risky behaviour or assault. It is for this reason that alcohol is closely associated with road crashes, fights and violence, coercive sexual activity and unprotected sex, domestic violence, perpetuation of poverty etc.

Area-wise binge and pathological drinking patterns are given in Table 7 and 8 respectively.

Binge drinking: It is noted with alarm that nearly 41% of the study population engaged in “binge drinking”. Approximately, one third (31.7%) of the population reported the frequency of this type of drinking to be less than monthly. Nearly twice the proportion of rural (11.2%) and slum-dwellers (11.8%) in comparison to town (4.4%) and urban (6.1%) dwellers indulge in such drinking ‘daily’, ‘weekly’ or ‘monthly’. Nearly double the proportion of town dwellers (46.2 % as against 23.7–27.3 % in the other areas) take more than four drinks on one occasion on less than monthly basis. These facts bear serious implications for public health policy-makers.

“Harmful use” of alcohol refers to a pattern of use which leads to adverse social, occupational, medical and public health consequences.

It is noted with alarm that nearly 41% of the study population engaged in “binge drinking”.

Nearly one fourth of the study population admit to being pathological alcohol-users reporting that, once started, they are unable to stop drinking.

Table 7: Pattern of “binge drinking”

	Rural	Town	Slum	Urban	Total
n	952	924	1036	346	3258
	%	%	%	%	%
Never	61.6	49.4	62.6	70.2	59.4
Less than monthly	27.3	46.2	25.6	23.7	31.7
Monthly	7.6	3.7	9.2	4.9	6.7
Weekly	2.1	0.5	1.9	0.6	1.4
Daily or almost daily	1.5	0.2	0.7	0.6	0.8
Total	100.0	100.0	100.0	100.0	100.0

Pathological drinking: Nearly one fourth of the study population admit to being pathological alcohol-users in the last 12 months. A greater proportion of respondents from rural areas report drinking on a ‘daily’ or ‘almost daily’ basis. A relatively greater proportion of reported pathological drinking, at least on a monthly basis, is seen among those living in rural (8.3%) and slum (6.5%) areas. It was observed that, of those who undertake “binge drinking” at least on a monthly basis, nearly 50%, across the four areas, are also pathological drinkers.

Table 8: Pattern of pathological drinking

	Rural	Town	Slum	Urban	Total
n	952	924	1036	346	3258
	%	%	%	%	%
Never	71.3	79.3	71.3	80.6	74.6
Less than monthly	20.4	17.9	22.2	16.8	19.9
Monthly	5.3	2.6	4.9	1.4	4.0
Weekly	0.8	0.1	1.4	0.9	0.8
Daily or almost daily	2.2	0.1	0.2	0.3	0.8
Total	100.0	100.0	100.0	100.0	100.0

4.4.4 Youth drinking patterns

The rapidly changing socio-economic status along with the liberalized values of society has affected not just the numbers but also the pattern of drinking: making it universal and more acceptable. Now there is evidence that drinking is being initiated at progressively younger ages in India. Data from Karnataka showed a drop from a mean of 28 years to 20 years between the birth cohorts of 1920–30 and 1980–90 (Benegal, 2005). Among the youth, alcohol use usually begins as ‘experimentation’ often initiated in peer groups. Unlike smoking, though drinking does not

take place during the actual time spent at school. But school friends usually form the first group in which alcohol consumption is initiated. It also occurs within the family or social gatherings on special occasions such as birthdays or marriages, where alcohol is served. Some young people move from experimentation to regular consumption and some to harmful consumption of alcohol. The first occasion of “getting drunk” is a milestone event, equal in importance to initiation into alcohol consumption. Parents’ drinking habits and the family’s attitude to alcohol strongly affects children’s pattern of alcohol consumption. The attitude of some communities in which alcohol consumption, particularly among young males, is condoned and accepted as a sign of “growing up” encourages young people to drink alcohol because their uncivilized behaviour is excused.

There is now evidence that drinking is being initiated at progressively younger ages in India.