Patterns & consequences of Alcohol Misuse in India - an epidemiological survey

National Institute of Mental Health and Neurosciences (NIMHANS), Bangalore

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**List of Acronyms**

IMFL – Indian Made Foreign Liquors (also increasingly referred to as IML – Indian Made Liquor) refers to western-style spirits such as whisky, rum, vodka, etc., manufactured in India.

NCD- Non Communicable Disease

FGD – Focused Group Discussion
Contents

Acknowledgements .......................................................................................................................... iii
List of Acronyms .............................................................................................................................. iv
Executive Summary ......................................................................................................................... i
Background .......................................................................................................................................... 1
Introduction ........................................................................................................................................ 2
Objectives .......................................................................................................................................... 2
Methodology ......................................................................................................................................... 2
Results and Discussion ...................................................................................................................... 8
  Patterns of Alcohol Use ..................................................................................................................... 8
  Types of alcoholic beverages consumed ......................................................................................... 8
  Prevalence of Alcohol Use ............................................................................................................ 10
  Change in patterns of alcohol use .................................................................................................. 10
  Adverse consequences to the drinker ............................................................................................. 12
  Hazardous Drinking - AUDIT Scores ............................................................................................ 13
Alcohol Use & Health Problems ........................................................................................................ 13
  Physical problems .......................................................................................................................... 13
  Psychological problems ................................................................................................................. 14
  Age at death .................................................................................................................................... 15
  Treatment seeking .......................................................................................................................... 16
  Health Seeking and Health Costs .................................................................................................. 16
Alcohol Use & Socio economic issues ................................................................................................. 17
Harms To Others ................................................................................................................................ 18
Associated Risk Factors ................................................................................................................... 21
  Illicit alcoholic beverages and problems ...................................................................................... 21
Treatment seeking among consumers of licit and illicit beverages .................................................. 22
  Age of onset of use and its consequences ...................................................................................... 22
  Gender and alcohol use .................................................................................................................. 23
Discussion .......................................................................................................................................... 23
Limitations ......................................................................................................................................... 26
Recommendations .............................................................................................................................. 26
References ......................................................................................................................................... 28
  Annexure 1 ..................................................................................................................................... 30
  Annexure 2 ..................................................................................................................................... 32
  Annexure 3: ................................................................................................................................. 34
  Annexure 4: ..................................................................................................................................... 41
  Annexure 5 ..................................................................................................................................... 44
Executive Summary

Alcohol consumption is the world’s third largest risk factor for disease and disability and is associated with many serious socio-economic issues, including violence, child neglect and abuse, and absenteeism at the workplace. Approximately 4.5% of the Global Burden of Disease and injury is attributable to alcohol use.

Measures of problems from alcohol consumption, including estimates of alcohol as a risk factor in the Global Burden of Disease, have primarily focused on harm to the drinker’s health. Yet it is clear that drinking often also causes harm to the health and welfare of others around the drinker – to family members and friends, and to others in the community and more broadly.

Recent studies from India, including the SEARO Bangalore study, the India arm of the WHO-GENACIS study and the WHO-NIMHANS study on Alcohol Related Harms in the Community suggested that persons in close contact with the alcohol user suffered disproportionate harms to health, and social and economic well being. At the same time the WHO Global strategy to reduce the harmful use of alcohol, endorsed by the Sixty-third World Health Assembly in May 2010, highlighted the importance of addressing harm to others than the drinker. The WHO initiated an international collaborative research initiative and identified four main directions or ‘streams’ including ‘Harm to others from drinking’. These converging lines of thinking provided the rationale for the present study.

OBJECTIVE AND METHODOLOGY

The objective of the study was to study the impact of alcohol misuse on health and socio-economic wellbeing of users and their families and harms to persons in contact with users.

Five regions within the country where there was relative paucity of information were considered as for the study centres: Cuttack – Orissa(sparse data on alcohol use, with poorer economic indicators; Dhule – Maharashtra (one of the most backward districts), Gangtok – Sikkim (expected to have a large proportion of the population using traditional home brew / illicit alcohol), Surat – Gujarat (a state under long-time prohibition), Vishakapatnam – Andhra Pradesh (anecdotal reports suggested a high prevalence of alcohol use with rapidly changing economic parameters).

The study undertaken in both rural and urban areas, adopted a case-comparison strategy (alcohol users and non-users) and interviewed individuals belonging to different socio-economic strata in a stratified sample. A composite instrument was designed after reviewing existing instruments used in India. Both quantitative and qualitative method of enquiry was adapted. Within the resource constraints, a greater number of centres were recruited to undertake the qualitative component of the study viz key informant interviews and focus group interactions. Thus, a pan-India perspective was made possible.

The questionnaire enquired into type(s) of beverage(s) consumed, patterns of use (quantity and frequency), AUDIT assessment, context of drinking, age at onset of use, consequences of use including amounts spent related to use, high risk behaviors. In addition Tobacco and other drug use, gambling were also enquired into. The Health Screener included conditions specific to alcohol use and also documented health care seeking. Local alcohol use patterns, locally available traditional/ illicit alcoholic beverages, ease of access to alcoholic beverages, trends in alcohol use, implementation of legislation, public perceptions about alcohol use, impact of alcohol use on health and health seeking, socio-economic impact were discussed by the participants of the qualitative studies.

A one day workshop for all the investigators along with the study team helped finalize the study questionnaires, to refine the study methodology and plan study logistics. The site investigators carried out training workshops with the site supervisor and field staff (interviewer) hired for the survey and also undertook monitoring. To reduce human errors in data entry, the current study used optical machine readable data entry formats and utilized intelligent character recognition software
KEY RESULTS

While, Indian Made Foreign Liquors (IMFL; like whisky, brandy, rum, gin and vodka) were the most preferred beverages, about half of the alcohol users reported having a second preference beverage. Spirits in whatever form, IMFL, country spirits or illicit are the most popular and beers and wines are much less preferred. In addition, there were a higher proportion of illicit and/or traditional home-brewed beverage (desi daru, chaang- beer and distilled spirits like raksi and jaan salpo ras (toddy) and mahua (distilled country spirit from the mahwa flower)) use in Surat in Gujarat, Dhule in Maharashtra, Cuttack in Orissa and Gangtok in Sikkim.

Harm is associated with both infrequent high volume and frequent high volume use of alcohol. Despite the confusion about standard drink sizes, among users, the common pattern of use is frequent use of high volumes of alcohol (six standard drinks or more). Regular pattern of drinking on weekday evenings and mornings which promote harm to the drinker and people in contact was found amongst one-fifth. The mean AUDIT scores among male users was 14.7 (7.8) [Range 1-33] and among female users was 4.3 (7.5) [Range 1-31] and more than 40% of users across most of the five sites had AUDIT scores >8.

Compared to 5 years back, there is an increasing availability and greater accessibility to alcohol (“It is much easier to get alcohol than milk!”), greater social acceptance of alcohol use and rampant and visible surrogate advertising (“No advertisement is needed for the sale of alcohol”). Increased prices have not lowered demand (“Now people are consuming more expensive drinks”). Drinking continues to be mostly a solitary, under socialized affair, mostly after work and outside home and 50% of income is spent on alcohol.

Alcohol use is not considered a liability in relation to work efficiency. Festive drinking - customs (drinking during festivals such as Diwali or Ugadi) and traditions (use of alcohol at times of death, marriage celebrations and birth of children) are common than previously reported in India. Narratives about heavy drinking of free alcohol distributed during elections at local, municipal and national levels were common.

A third of male drinkers and fourth of female users reported that their drinking had caused problems in various domains (finances, physical health, social life, household responsibilities, personal relationships).

Despite limitations (being self-reports), users had almost three times the rate of sleep problems, twice the rate of presumptive heart problems and injuries than non-users. They also reported significantly greater rates of skin problems, jaundice, burning pain in the stomach, joint pains, chronic cough and fever suggestive of tuberculosis or chronic lung infections and other gastro-intestinal problems. Heavy (and more frequent) drinking was associated with more frequent ill-health especially accidents and injuries, chest pain and heart problems, and high blood pressure.

Alcohol users were significantly more likely to suffer poorer psychological well being (inability to enjoy activities, pain in the body, constant strain and losing sleep over worries)

Among reported deaths (Male=538; Female=100) in the past five years amongst those above the age of 25, both male and female users had a significantly lower mean age at death than non-users (57.2 ±14.2 years vs. 60.7 ±15.5 years; 57.7±15.5 years vs. 61.6 ±16.2 years, respectively).

Alcoholism is not considered a disease and religious beliefs / religion, stigma, social status and prestige prevents one from accessing help especially amongst women. Not just communities but even health personnel including doctors are ignorant seeking assistance or making available interventions. Alcohol users were more likely to have had a larger number of hospital admissions in the past 3 months and the past year for self and also for family members. Health seeking was higher among infrequent high and frequent high drinkers in all sites except in Vishakhapatnam.

Alcohol and its consequences impose a significant and additional economic burden in families with alcohol using members and disproportionately borne by spouses and children. Alcohol users reported additional expenses related to hospitalization or expenses on medication for any ailment for themselves and their family members. Loans taken on higher interest rates further pushed the families into a debt trap. A large proportion of various welfare/ job-
guarantee / compensation schemes payments are apparently spent on alcohol ("On the day the (welfare) payments are received, (the recipient) spends the whole day drinking alcohol and (alcohol) dues are paid out of these payments")

Users reported a smaller proportion of their income spent on food and essential items and savings and greater loans and debts. Non-user families had a significantly larger asset-holding score than user families.

In the past five years, significant proportion of users (5.2%) than non-users (4.2%) reduced consumption of food and essential commodities, incurred greater debts (users (15.7%) v/s non-users (12.4%)), borrowed money with greater interest rates (users (5.9 %) v/s non-users (3.8%)). Compared to non-users, a significant number of users found difficulty in buying food and essential items (11% vs. 6.9%); paying rent (4% v/s. 2%); paying children’s school fees (2.8% v/s. 6.4%) or had difficulties with creditors (2.5% v/s. 5.4%). There were a significantly higher proportion of school-age children who were prematurely out of school in user families.

Users were also much more likely than non-users to have decreased efficacy or productivity at work as a result of greater absenteeism due to their self or having taken greater leave of absence due to a family member’s illness.

The greater role of alcohol in domestic violence was recognized universally as also creating public nuisance. “After drinking purposely fights for small issues and in vain, behaves violently with family and others”; “After drinks, who is wife and who is children! They are beaten squarely”. Ambivalent attitudes were also observed: “My husband is a good person when not drunk but after drinking he will simply fight with me without any reason, scream on children and no more peace is soon in the house”. “(Husband) often beats children when he is drunk, otherwise he is such a good father”.

There appears to be a greater normalization and acceptance of alcohol use from rural respondents and therefore less of causal attribution of alcohol as a factor in violence and other harm.

Persons having contacts (40% (n= 923) of male non-drinkers and 75% (n=1408) of female non-drinkers) with alcohol users (in the family or among friends) clearly reported a significantly greater proportion of adverse events than persons without. The adverse event ranged from physical and emotional violence and injury, monetary loss, failure to live up to responsibilities, social embarrassment and physical deprivation. Non-drinking contacts also had to bear extra responsibilities as drinkers failed to do what was expected of them or had to spend time caring for intoxicated or ill drinkers.

In families with alcohol users, there was a disproportionately higher number of children (more than two times) facing violence (be it verbal or physical), children witnessing violence or being left in risky situations. Children in alcohol using families were almost at three fold greater risk of having less money for childcare related activities.

While co-workers were forced to compensate for the reduced productivity of their alcohol misusing colleagues, for the users, there was an increased likelihood of accidents at work and generally reduced overall productivity.

While, > 10% had suffered physical abuse/ violence, been involved in road traffic accidents, suffered damage to property due to intoxicated strangers, half of the respondents reported having been troubled by strangers’ drinking, a third had gotten into serious arguments with intoxicated strangers or been abused / threatened, around 20% reported feeling unsafe in public places or public transport. Despite the high reporting only a small proportion (2.7% in direct contact and 1.6% without direct contact) sought legal recourse / called the police.

Compared to non-users, among alcohol users, tobacco use, use of pharmaceutical agents, illicit drug use was greater. However, surprisingly, the prevalence of frequent treatment seeking was least among persons drinking the traditional brews: IML drinkers reported more than one and a half times more and illicit spirit drinkers almost three times more.

Across the sites, there was a great deal of concern about ineffective implementation of existing laws pertaining to alcohol control, presumably because of the greater economic returns alcohol sales and the impracticality of prohibition (“jisko chahiey hota hai woh jugaad kar hi letah” (whoever wants can manage to get it)).
Young onset alcohol users (defined as those who began regular drinking before the age of 21 years), constituted more than half the population of drinkers in the survey, have almost double the prevalence of frequent high drinking, with greater consequences.

The greater proportion of alcohol users remains men and drinking among women is still uncommon and stigmatized, with the sole exception being in Sikkim. And in other places under special circumstances (brandy during post-natal period, etc.,). There has been increasing use of alcohol by women, predominantly related to the ‘empowerment’ and availability of money especially in urban areas. Alcohol use among women was generally still looked down upon: “(women) drinking will adversely affect child rearing and ruin the family. Such girls find difficulty in getting married. It is not good for her safety and culture. Her drinking is a big societal loss”.

RECOMMENDATIONS

The harm from alcohol is recognized, but measures of problems from alcohol consumption, have primarily focused on harm to the drinker’s health. Yet it is clear that drinking also causes harm to the health and welfare of others around the drinker – to family members and friends, and to others in the community and more broadly. Interventions to reduce harm from alcohol cannot therefore be limited to reducing heavy consumption in the population or engaging heavy drinking individuals in cessation treatments. The available evidence clearly points to the fact that harm to drinking individuals and persons in contact with them are not restricted to the context heavy drinkers or alcohol dependent individuals alone. Yet the bulk of initiatives to reduce harm have focused on getting the heavy drinking or alcohol dependent individual to cease drinking- leading to an over reliance on creating deaddiction centres and rehabilitation centres. This as the sole strategy has been unhelpful in its societal impact.

1) Implement screening and brief intervention as part of routine medical care including emergency room visits by embedding it in the NCD programme in India. Brief alcohol interventions need to be part of community care delivery by the ASHAs and community level personnel.
2) Integrate alcohol control measures into other ongoing or planned welfare programmes by establishing linkages with programmes for women and child welfare, economic welfare and employment guarantee schemes, school health initiatives, lending organisations and micro finance institutions.
3) Shift the priority to adopting population level measures for reducing average consumption through control measures such as taxation, delaying age at first drink by enforcing existing drinking age norms, reducing drinking and driving etc. A 10% relative reduction Adult per capita consumption in persons aged 15+ years by 2025 is a possible target.
4) Promote the construct of harms due to alcohol similar to secondary smoking in public discourse and public media to strengthen alcohol control advocacy.
5) Integrate Alcohol control strategies into the District Mental Health Programme of India.
6) Institute setting based interventions in workplaces, communities, educational institutions and families.
7) Strengthen public health research to track the evolving alcohol problem and its associated effects based on a public health model.
8) Catalyse Human resource development and strengthen capacity across the sectors of health, police, welfare, transport, law to address measures for early detection and interventions.
9) Organise targeted and focused mass media campaigns continuously to inform the society of the harm from alcohol which supplement other control measures.
10) Empower communities and harness community resources to reduce the growing alcohol problem.
Background

Alcohol misuse is increasingly being recognized as an important cause of mortality (5% of attributable cause; similar to that of unsafe water and hygiene; greater than that due to tobacco and hypertension), medical morbidity (physical and psychological consequences), and disproportionate social and economic costs. Along with salt, sugar and tobacco, alcohol stands out as a key “risky commodity” affecting global rates of noncommunicable disease.

The World Health Assembly 2010 endorsed a Global Strategy for Alcohol wherein member nations including India, signed on to reduce risks/harms from alcohol misuse. All member states acknowledged the harmful use of alcohol as a major public health issue and requested that alcohol problems receive a higher priority at WHO and that more resources be allocated to address those problems and to implement the new global strategy. The Global Strategy recommended that:

Local, national and international monitoring and surveillance are needed in order to monitor the magnitude and trends of alcohol related harms, to strengthen advocacy, to formulate policies and to assess impact of interventions....establishing effective frameworks for monitoring and surveillance activities including periodic national surveys on alcohol consumption and alcohol-related harm and a plan for exchange and dissemination of information national surveys on alcohol consumption and alcohol-related harm.(WHO, 2010).

The impact of harmful use of alcohol on individual health and well being is well recognized, but the impact of an individual’s alcohol misuse on family functioning and well-being could be particularly significant. The WHO Global strategy highlights the importance of addressing harm to others than the drinker and states that:

Special attention needs to be given to reducing harm to people other than the drinker and to populations that are at particular risk from harmful use of alcohol, such as children, adolescents, women of child-bearing age, pregnant and breastfeeding women, indigenous peoples and other minority groups or groups with low socioeconomic status.(WHO, 2010).

In spite of a growing literature addressing the above-mentioned issues, research data from low- and middle-income countries, including India is sparse and scattered. To plan and implement effective strategies, policy planners in individual countries need to have data on the actual problems on the ground and the felt need in their communities.

The previous generation of epidemiological studies from India has mostly focused on the prevalence of alcohol use, and estimates of per capita consumption (Mohan et al, 2001; 2002a,b; Ray et al, 2004; Ponnudarai et al, 1991). However, it is increasingly recognized that mean consumption is an incomplete predictor of risk, and attention is increasingly turning to the impact of hazardous drinking patterns and the health and economic consequences of alcohol misuse (Rehm et al, 2003).

It is also increasingly recognized that the harms from alcohol are not restricted to the drinker alone. Following on the outcomes of the WHO meeting on priorities for international research organized in conjunction with the first Global Expert Meeting on Alcohol, Health and Social Development (Stockholm, Sweden, 2009), the Management of Substance Abuse unit at the Department of Mental Health and Substance Abuse at the WHO headquarters has initiated an international collaborative research initiatives on “Harm to others from drinking”.

The current study was planned to explore the harms from alcohol misuse which impact the alcohol user as well as non using persons in contact with the user, with a focus on effects on their health and socio-economic wellbeing.
Introduction

Accruing data on the public health consequences of alcohol tends to highlight the growing appreciation that the health burden attributable to alcohol misuse is strongly influenced by the patterns of use and the influencing social conditions. It is also increasingly accepted that in predominantly abstinent cultures, such as in India, measures of average consumption such as per capita consumption fail to adequately reflect the impact of individual consumption. Further, large volumes of undocumented consumption also render per capita consumption figures, traditionally calculated from official production and excise sources, grossly inaccurate.

While some recent studies in India have examined patterns of use and to a limited extent, its impact on health and health seeking, the health burden attributable to alcohol is notoriously difficult to assess, in a situation where the treatment gap is large (so that many of the afflicted may not be aware of their conditions) and the association between illness and alcohol misuse is rarely made by physicians (see review: Gururaj et al, 2011).

There is also, growing interest in examining the social cost of alcohol misuse. This obviously includes direct and monetizable costs, such as costs of treatment of alcohol related conditions to the drinker, but far more important and compelling from the policy and advocacy point of view are the indirect and often intangible/un-monetizable costs, such as foregone opportunities, which are borne by non-drinking persons in contact with the drinker. Again, these costs are difficult to gauge in India, as there is poor documentation of even health care costs. A few recent studies have looked different measures of social cost (Murthy et al, 2010; Gururaj et al, 2006a,b; Benegal et al, 2003; 2005:).

Also, the people of India comprise a heterogenous population group with wide socio-cultural variations. And these extend to differences in alcohol use patterns. Recent studies of alcohol misuse in the Andaman and Nicobar islands (Benegal et al 2008) and in Sikkim, warn us against generalisations and underline the need to study the patterns of alcohol misuse in different parts of India and the dynamic nature of alcohol sales and its impact, there is an urgent need to generate information which reflects the problems-needs situation from different parts of a variegated country like India.

Objectives

Recognising the urgent need, to generate information, which reflects the problems-needs situation, the twin objectives of the study were to

1) Study the impact of alcohol misuse on health and socio-economic wellbeing on users and their families
2) Document the harms to persons in contact with alcohol users.

Methodology

Approach:

Regions within the country were selected where there was relative paucity of information. Both quantitative and qualitative method of enquiry was adapted. Within the resource constraints, a greater number of centres undertook the qualitative component of the study viz key informant interviews and focus group interactions. Thus, a pan-india perspective was made possible.

The study adopted a case-comparison strategy to estimate the greater harm from alcohol use and also distinguish the patterns amongst women users, underage user and other male adults.
To achieve the stated objectives, a house to house survey was undertaken to study the alcohol use patterns and consequences to the users, their family-members and others in contact with them. To supplement the findings from the quantitative component of the study, a qualitative enquiry using Focused Group Discussions (FGD) and key informant interviews with key stakeholders involved in alcohol production-sales-distribution; enforcement of alcohol regulations; health personnel treating alcohol related health problems; community members etc. in order to get a more extensive understanding of the availability changing patterns of consumption and impact of alcohol in communities. In order to provide a wider picture, FGDs were conducted across additional centres apart from the centres were quantitative study was undertaken.

The predominant themes of enquiry were: a) Local alcohol use patterns; b) locally available traditional/ illicit alcoholic beverages; c) ease of access to alcoholic beverages; d) patterns and trends in alcohol use; e) implementation of legislation related to alcohol sales and drinking; f) public perceptions about alcohol use; g) impact of alcohol use on health and health seeking; h) impact on socio-economic aspects including development; i) harms from alcohol use on non-users; j) possible solutions to the problems pertaining to alcohol use.

**Study centres:**

Across the country, 5 regions were chosen where information was sparse and a good survey team consented to be part of the study. These regions (in alphabetical order) were:

1. Cuttack – Orissa (sparse data on alcohol use, with poorer economic indicators)
2. Dhule – Maharashtra (one of the most backward districts)
3. Gangtok – Sikkim (expected to have a large proportion of the population using traditional home brew / illicit alcohol)
4. Surat – Gujarat (a state under long-time prohibition)
5. Vishakapatnam – Andhra Pradesh (anecdotal reports suggested a high prevalence of alcohol use with rapidly changing economic parameters)

A brief overview of the study areas is given as Box 1

**BOX 1: Overview of study areas**

**CUTTACK** the former capital is the largest city of the state of Orissa is situated at the beginning of the Mahanadi river delta and is surrounded by the river Mahanadi and its tributaries from almost all the sides. The city of Cuttack is the second most populous district of Orissa, after Ganjam and is known as the business capital. Albeit, with limited industrialization, agriculture is the main source of livelihood (76% of the population) and is a major exporter of cash crops. According to the 2011 census Cuttack district has a population of 2,618,708, sex ratio of 955 females for every 1000 males and a literacy rate of 84.2%. As of 2011 census, Cuttack had a proportion of 606,007 (Males 52% and females 48%), literacy rate of 77%.

**DHULE** district of Maharashtra state is in central India and the city of Dhule is the administrative headquarters. Dhule one of the country's most backward districts. After bifurcation, tracts of land predominantly inhabited by tribal population, was named into the Nandurbar district. Agriculture remains the basic profession of the population. In the past, Dhule was one of the big centers for textile industry, with both spinning and weaving operations. According to the 2011 census the district has a population of 2,048,781 with a sex ratio of 941 females per 1000 males and a literacy rate of 74.6%, while the city of Dhule with a population of 376,093 (males 52% and females 48%), Sex ratio of 940 females per 1000 males, literacy rate of 90%.

**GANGTOK** the capital and largest town of the frontier Indian state of Sikkim is located in the eastern Himalayan range. The town belongs to different ethnicities such as Indian-Nepalis, Lepchas and Bhutia. The town lies on one side of a hill and is flanked on east and west by two streams which joins the Teesta. Gangtok remained a small hamlet until the construction of the Enchey Monastery in 1840 which made it a pilgrimage center and is now a prominent and popular Buddhist pilgrimage site. Sikkim's mountainous terrain results in the lack of train or air links, limiting the area's potential for rapid industrial development. The hospitality industry of Gangtok is the largest and a main base for Sikkim tourism. Many of Gangtok's residents are employed directly and indirectly in the tourism industry. Ecotourism has emerged as an important economic activity in the region which includes trekking, mountaineering, river rafting and other nature oriented activities. Gangtok's economy has a thriving Cottage industry in watch-making, country-made alcohol and handicrafts. Hinduism and Buddhism are the most popular religions along with a sizeable Christian population and a small Muslim minority. According to the 2011 census of India, the population of Gangtok was 98,658 (Males 53% and females 47%) with a literacy rate of 82.17%. Of the total urban population of Sikkim, Gangtok Notified Town Area has a share of 55.5% and including Gangtok, East District has a share of 88% of the total urban population. The quality of life, the pace of development and availability of basic infrastructure and employment prospects has been the major cause for rapid migration to the city.

**SURAT** on the west coast of India is a well-developed commercial city in Gujarat and is one of the fastest growing cities.
Surat is Gujarat’s second largest city and India’s 8th most populated city located south of state capital Gandhinagar (growing much as metro Mumbai). Unauthorised residential buildings and slums dot the city as the explosive growth in population is mostly through migration. Surat was an important port city and is situated on the banks of the Tapti river. The city is largely recognized for its textile and diamond businesses (diamond capital of the world and textile capital / Manchester textile city of India). 92% of the world’s diamonds are cut and polished in Surat while, 40% of the nation’s total man-made fabric and 12 % of the nation’s total fabric is produced here. The population of Surat according to new city limits is 4,706,429 (Males 53% and females 47%), literacy of 83%.

VISAKHAPATNAM also known as Vizag or Waltair is a port city on the southeast coast of India, second-largest city in the state of Andhra Pradesh (after Hyderabad) and the third-largest city on the east coast (after Chennai and Kolkata). Visakhapatnam has the only natural harbour on the east coast of India. In addition to being an east-coast seaport (India’s largest seaport and the country’s oldest shipyard), Visakhapatnam is an industrial city. The city is home to several state-owned heavy industries and a steel plant. From a small fishing village in the 20th century, Visakhapatnam has grown into an industrial hub. Factors that contributed include the natural harbor, its location between Madras and Calcutta, access to NH5 and a developed network of railways. Listed as one of the 100 fastest-growing cities in the world, in 2011 census, Visakhapatnam had 1,730,320 persons (male 875,199 and 855,121 and female ) with a sex ratio of 977 per 1000 males, 82.66% literacy and majority being Hindus.

![Map of India showing Surat and Visakhapatnam](image)

**Study centres where quantitative and qualitative studies were undertaken**

### Sampling Methodology

**Study area:** The survey was undertaken in both rural and urban areas from amongst the rural and urban field practice areas adopted by medical colleges in the designated sites.

**Sampling**

**Sample size:** From each study centre, with an estimated consumption level of 25% among men in the general population, a relative error of 5%, confidence levels of 95%, non-response rate of 15%, a total of 1000 users and corresponding 1000 age sex nonusers, matched were needed. Within this 70% were sampled from rural and 30% from urban in accordance with census 2011. Within each urban and rural areas, proportionate interviews were undertaken from high-, middle- and low-income households.
A stratified sampling plan was utilised. The first strata was the Census Enumeration Blocks while the second strata was the individual households. As the aim of the study was to study patterns and consequences and differences between alcohol users and non-users, the focus was on interviewing members of the family. If the household had one or more members who were regular drinkers (had drunk alcoholic beverages at least once in the past twelve months) it was designated an alcohol-user household. When no member of the family was a regular drinker, it was designated as a non-user household. Woman drinkers and underage drinkers (below the age of 25 years), were preferentially interviewed in each user household as there is very little information on this vulnerable group. The protocol adopted for undertaking the household survey and selecting the respondent is given along with. The detailed sampling plan is in the appendix.

### Rural and Urban households identified in the five sites

<table>
<thead>
<tr>
<th>City</th>
<th>Urban</th>
<th>Rural</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cuttack</td>
<td>445 (29.6%)</td>
<td>1057 (70.4%)</td>
</tr>
<tr>
<td>Dhule</td>
<td>489 (30.8%)</td>
<td>1097 (69.2%)</td>
</tr>
<tr>
<td>Gangtok</td>
<td>196 (21.2%)</td>
<td>729 (78.9%)</td>
</tr>
<tr>
<td>Surat</td>
<td>889 (35.4%)</td>
<td>1625 (64.7%)</td>
</tr>
<tr>
<td>Vishakhapatnam</td>
<td>689 (33.8%)</td>
<td>1350 (64.1%)</td>
</tr>
</tbody>
</table>

### Two Stage Sampling Design

1. **Household Identified**
   - Responsible Family Member/Head of Household — interviewed on FAMILY QUESTIONNAIRE [N=8567] in 5 sites

2. **User [n=3692] (45%)**
   - All Users [n=3977]
   - All Nonusers [n=10717]

3. **Non-User [n=4641] (55%)**
   - Female Family members [n=14352]
   - Male Family members [n=14694]
   - All Users [n=1856]
   - All Nonusers [12496]

### Study instruments:

**A] Quantitative survey**

The instruments used for the quantitative survey were modified to achieve the study objectives. The questionnaires used in earlier studies undertaken at NIMHANS were reviewed and a composite instrument was designed. The following questionnaires were reviewed:
- Prevalence of Undocumented Alcohol
- GENACIS study on Gender and Alcohol
- The questionnaire used for WHO supported the Burden and Socio-economic impact of alcohol use: the Bangalore study
- The NIMHANS-ICMR study on Prevalence
and patterns of alcohol misuse in the Andaman and Nicobar Islands; e] WHO-NIMHANS study on Household indicator of Alcohol Related Harms in the Community. After discussion amongst the study team and in consultation with the WHO-India country office, additionally, questions from the WHO Harms to Others questionnaire were also included. The latter was to assess the feasibility of undertaking the WHO Harms to Others in a larger geographic area within the country. The final instrument used for the quantitative component of the study is given as appendix.

The questionnaire had separate sections for the family and for the individual household member. The section for the whole family included different socio-demographic variables, documenting tangible assets and also included enquiries regarding specific details related to recent deaths in family and alcohol or tobacco use. The variables in the individual questionnaire comprised items on demographic and socio-economic details, Health Screener with conditions specific to alcohol use and health care seeking. Detailed enquiries were made regarding the cost of health care seeking. The above section documented response from all respondents. A separate section made enquiries to elicit details of alcohol use. This included type(s) of beverage(s) consumed, patterns of use (quantity and frequency), AUDIT questions, context of drinking, age at onset of use, consequences of use including amounts spent related to use, high risk behaviors. In addition Tobacco and other drug use, gambling were also enquired into. Specific questions from the WHO Harms to Others supplemented the study questionnaire. This section was again answered by all respondents (both users and non-users).

B] Qualitative survey

A questionnaire consisting of open-ended prompts to generate discussion was constructed by expert-consensus to undertake the Focus Group Interactions (FGI) and Key Informant Interviews (KII). The predominant themes of enquiry were: a] Local alcohol use patterns; b] locally available traditional/ illicit alcoholic beverages; c] ease of access to alcoholic beverages; d] patterns and trends in alcohol use; e] implementation of legislation related to alcohol sales and drinking; f] public perceptions about alcohol use; g] impact of alcohol use on health and health seeking; h] impact on socio-economic aspects including development; i] harms from alcohol use on non-users; j] possible solutions to the problems pertaining to alcohol use. The FGI and KIIIs were conducted with persons who were presumed to have special knowledge on alcohol use and its impact in the community. These included a] Primary Health Care personnel; b] employers; c] development agency personnel; d] government functionaries (including police and members of the judiciary, excise personnel etc. A resource guideline was provided to each group to undertake the qualitative component of the study.

Workshop with study centre investigators

A one day workshop was held on 12th August 2011 for all the investigators along with the study team. The key objective of the meeting was to a) finalise the study questionnaires, b) to refine the study methodology, c) to delineate the study logistics d) to ascertain the administrative and financial modalities e) to list the monitoring mechanisms. The highlights of the discussion is given as appendix and the key decisions taken at the end of the meeting included modifications into the questionnaire, modifications related to study methodology especially in Sikkim and budgetary allocation to undertake supervisory visits. It was decided that the questionnaires for the respective sites would be printed at NIMHANS and couriered to the respective centres in order to maintain a uniform methodology.

Further, it was decided that each centre, would undertake a translation of the study instrument into the local language and also train the field level data collectors. Specific training was also provided regarding the use of machine readable data entry forms.

The site investigators in turn carried out three day training workshops with the site supervisor and field staff (interviewer) hired for the survey. The training comprised: a] Discussion on the background and relevance of the study in the specific region; b] Familiarization with household interview techniques and likely problems; c] Familiarization with the survey instrument – item by item; d] Administering the instrument in vitro by interviewing each other with feedback on accurate understanding of items, proper filling up of OMR form and debriefing; e] Interviews carried out in the field setting by each interviewer followed by feedback on accuracy and debriefing.
Monitoring and issues related to quality control

Site coordinators visited the study areas for surprise checks apart from random cross check of the filled up forms. Weekly monitoring sheets with details of work carried out were transmitted to the coordinating centre for feedback. A fortnightly teleconference via Skype between the 5 sites was and the Coordinating centre was planned to discuss challenges and possible solutions but in practice was reduced to once a month.

Data entry (Optical Machine Readable format)

The current study used a novel method for data entry. Since the prevalent method of manually entering data into a database is exceedingly time consuming and responsible for extensive errors, which require laborious cleaning of data, it was decided to use optical machine readable and intelligent character recognition software to enable data entry. The questionnaire for the quantitative survey was designed so that it was in machine readable format. Interviewers were required to legibly tick within the boxes or enter numbers in the machine readable sheet. The local co-ordinator and investigator were responsible to check that field staff did so appropriately. The questionnaires were then scanned and using the OCR/OMR software (ABBYY FlexicapTURE Engine 10.0) were transferred to a statistical database SPSS- 16 (Statistical Package for the Social Sciences).
Results and Discussion

Patterns of Alcohol Use

Types of alcoholic beverages consumed
The FGDs revealed that in most of the twelve states assessed, Indian Made Foreign Liquors (IMFL; like whisky, brandy, rum, gin and vodka) were the most preferred beverages. The exceptions were Surat in Gujarat, Dhule in Maharashtra, Cuttack in Orissa and Gangtok in Sikkim, where respondents felt that there were a higher proportion of illicit and/or traditional home-brewed beverages drunk.

Days Times of India on surat
Surat: Of course, in Gujarat, because of the prohibition laws, all alcoholic beverages are technically illicit (whether it is IMFL smuggled in from neighboring territories like Maharashtra and Daman or brewed and distilled locally) with the sole exception of some licensed outlets in 5 star hotels. But there is a large amount of local manufacture of illicit brewed and distilled beverages.

Respondents from Dhule reported that both licit country liquor (desi daru) and illicit spirits and were more popular than IMFL-spirits, beer and wine. This might be related to the demographics of Dhule, a smaller town. Group members from Gangtok reported that a wide variety of traditional home brews (like chaang-beer and distilled spirits like raksi and jaan continued to enjoy popularity, but IMFL was rapidly supplanting traditional beverages. They also noted that the traditional convivial drinking habits were being replaced by heavy and solitary drinking.

Information from Cuttack points to the continued preference of traditional brewed and distilled beverages (illicit) – like salpo ras (toddy) and mahua (distilled country spirit from the mahua flower). However, here too, IMFL is making rapid inroads.

The results from the household survey support the information received from the Focused Group Discussions. A large proportion of the beverages drunk in Cuttack, Dhule, Gangtok and Surat consist of undocumented beverages. However, across sites, IMFL spirits are the beverages most drunk. Table 1

Breaking the Prohibition in Surat
Prohibition in Gujarat has been in force since 1960. Still, consumption of alcohol is common. It is popularly said that, “Gujarat is dry by law and wet by preference”. In Surat especially, historically, alcohol use has been common among both men and women of certain communities and is part and parcel of the social code of Surat’s Parsi and Ghachi/Khatri communities. Liquor is often served, albeit discreetly, at business functions and marriages irrespective of class.

The demand fuels smuggling and illicit production. IMFL is smuggled from Daman, near Surat (popularly known as Damaniya), and Diu -off the Kathiawad peninsula, from Madhya Pradesh and Daman. The illegal trade–allegedly worth an annual turnover of over Rs 1,500 crore, is managed by a dozen major bootleggers and many other smaller country-made liquor operators, functioning from the border areas of Gujarat with impunity. Liquor (especially beer) is often procured by illegal diversion from defence canteens from cantonment areas of the state. There is also widespread illicit local production. Traditionally, a few specific communities are involved in the illicit liquor trade and hence the operations are close knit. In Surat, the Gola community has been involved in illicit liquor production as their ancestral business. Tribal areas brew mahu at sugar-cane, toddy from the sap of the palm trees.

Liquor can also be legally acquired through a system of temporary and longer-term permits which allow legal purchase of liquor from designated places. Foreigners and Non-resident Indians can purchase 30 day liquor permits at designated 5 star hotels and other locations. Tourists arriving by air can buy on-the-spot liquor licenses from Gujaratic Department counters at the airport. Visitors staying longer than 30 days can avail of a non-resident permit. Liquor can also be purchased against a medical permit –certifying that alcohol use is recommended for medical reasons!
enumerates the proportion of alcohol users who endorsed a particular type of beverage as their beverage of choice (i.e. the beverage they drank most frequently. However, about 50% of alcohol users reported having a second preference beverage.

<table>
<thead>
<tr>
<th>Table 1: Beverage of First preference</th>
<th>Cuttack</th>
<th>Dhule</th>
<th>Gangtok</th>
<th>Surat</th>
<th>VSK</th>
<th>All sites</th>
</tr>
</thead>
<tbody>
<tr>
<td>IMFL spirits– whisky, rum, vodka, gin</td>
<td>19.4</td>
<td>15.3</td>
<td>35.4</td>
<td>23.3</td>
<td>35.5</td>
<td>24.1</td>
</tr>
<tr>
<td>Country liquor-spirits (legal)</td>
<td>3.9</td>
<td>25.5</td>
<td>3.3</td>
<td>3.5</td>
<td>30.9</td>
<td>16.6</td>
</tr>
<tr>
<td>Beer strong</td>
<td>6.3</td>
<td>9.9</td>
<td>12.0</td>
<td>3.7</td>
<td>7.0</td>
<td>7.5</td>
</tr>
<tr>
<td>Beer – normal</td>
<td>8.5</td>
<td>6.7</td>
<td>15.0</td>
<td>3.1</td>
<td>9.8</td>
<td>8.1</td>
</tr>
<tr>
<td>Wine</td>
<td>1.2</td>
<td>4.4</td>
<td>10.9</td>
<td>5.0</td>
<td>12.9</td>
<td>6.3</td>
</tr>
<tr>
<td>Locally made beer/wine</td>
<td>58.9</td>
<td>2.9</td>
<td>23.0</td>
<td>12.5</td>
<td>3.8</td>
<td>21.1</td>
</tr>
<tr>
<td>Illicit liquor spirits</td>
<td>1.9</td>
<td>35.4</td>
<td>0.4</td>
<td>48.9</td>
<td>0.2</td>
<td>16.3</td>
</tr>
</tbody>
</table>

Spirits in whatever form, IMFL, country spirits or illicit are the most popular and beers and wines are much less preferred. India still remains a country where spirits rule the roost, despite industry reports of rapidly increasing rates of beer and wine sales. However, in comparison to previous studies from India, the rates of beer and wine drinking appear to be higher than in the past (Gururaj et al, 2011).

**Quantity X Frequency**

Harm has been associated with both infrequent high volume and frequent high volume use of alcohol. It is therefore useful to see the proportion of the drinking population that has these patterns as their typical drinking pattern.

The FGDs uniformly report that the common pattern of use across all the twelve sites is frequent use of high volumes of alcohol, among users. There is a great deal of confusion about standard drink sizes. The standard international unit drink (12 gm of ethanol ~30 ml of spirits @ 42.8% v/v / 330 ml of 5% v/v beer) is by-and-large not the standard measure poured across homes and bars of India. When alcohol users refer to one drink – most often they refer to varying amounts ranging from a peg – 60 ml measure of spirits to a quarter – 270 ml of spirits, or more confusing measures of a glass of toddy or desi-shaarab.
This is reflected in the household survey (Figure 1) where almost 60% of male drinkers (except in Surat and Vishakhapatnam), reported drinking high quantities (six standard drinks or more) whether infrequently or frequently (more than 2-3 times per week). This is a pattern of explosive, intermittent and persistent, high use - that has been found in a number of studies, among the majority of alcohol users in India, and the findings from this survey is along expected lines.

Given the information from the FGD’s in Vishakhapatnam, the predominance of self-reported Infrequent low and frequent low drinking in the survey appeared incongruous. We feel that it may be related to confusion about standard drink sizes among consumers as also the field staff. As reported in the FGDs, a unit drink size in the Vishakhapatnam population can range from 60 ml (2 drinks) to 270 ml (9 drinks). In which case, a large proportion of the respondents reporting low quantities would actually populate the Infrequent High and Frequent High categories.

Prevalence of Alcohol Use

Caveat: The study was not designed to calculate the prevalence of alcohol use in the communities surveyed, but to study the impact of alcohol use on a number of health and socio-economic parameters. Nevertheless, using the total number of people covered by the family questionnaire (No. of families x family members above the age of 15) as the denominator, we tried to calculate the prevalence of alcohol use (Table 2).

The prevalence of alcohol use among males in the five sites, Dhule (Maharashtra), Gangtok (Sikkim), Surat (Gujarat), Vishakhapatnam (Andhra Pradesh) and Cuttack (Orissa) was calculated at 28.4%, 43.2%, 17.4%, 33.4% and 21.8% respectively. The figures compare favorably with the estimates derived from the National Family Health Survey – Round 3 (NFHS-3) which had reported prevalence at 24%, 45%, 16%, 47% and 40% for these states respectively. Among women, the figures of 2.2% in Dhule, 39.5% in Gangtok, 21.9% in Surat, 6.9% in Vishakhapatnam and 5.9% in Cuttack. The prevalence figures of women’s drinking in the NFHS-3, for Maharashtra, Sikkim, Gujarat, Andhra Pradesh and Orissa were 0.4%, 19.1%, 0.8%, 6.8% and 7.3% respectively.

Change in patterns of alcohol use

Across all sites, there was unanimous agreement that there was increasing availability and greater accessibility to alcohol compared to five years back. One older female respondent in the Vishakhapatnam area noted “It is much easier to get alcohol than milk!” There is decreasing use of illicit liquor which is being increasingly replaced by IMFL due to stringent checks and punitive action on illicit alcohol producers and sometimes overt promotion of IMFL by local excise authorities. In the Vishakhapatnam area, Uttarakhand and Mangalore – there has been a virtual replacement of illicit spirits by IMFL, due to the stringent action of the excise department on illicit manufacture. But as some cynical observers in Mangalore noted, “these officials act almost like agents of the liquor industry in promoting a crossover to IMFL!”

There is a sense that there is greater social acceptance of alcohol use than before. The common refrain is: “Yes drinking too much is a problem. Little drinking in moderation is not bad”. “A peg (popularly believed to be 60ml of spirits) or two per day of IMFL or (even) country liquor is an appropriate amount to drink” “Alcohol use in moderation (up to 80-90 ml) is okay” says a health professional in Pondicherry!

Surrogate advertising is rampant and visible. “No advertisement is needed for the sale of alcohol”. Social role models like cricketers and popular cinema actors do not hesitate to advertise and endorse alcoholic beverages (technically similarly named and shaped surrogate products) – glamorizing and normalizing alcohol use. “Film stars and cricketers are drinking alcohol and advertising them …everyone else wants to follow them”.

### Table 2: Prevalence of alcohol users and abstainers in the sampled population

<table>
<thead>
<tr>
<th>Male</th>
<th>Female</th>
</tr>
</thead>
<tbody>
<tr>
<td>Abstainers</td>
<td>Users</td>
</tr>
<tr>
<td>Dhule</td>
<td>2875 (71.6)</td>
</tr>
<tr>
<td>Gangtok</td>
<td>741 (56.8)</td>
</tr>
<tr>
<td>Surat</td>
<td>2530 (82.6)</td>
</tr>
<tr>
<td>Vishakhapatnam</td>
<td>2197 (66.6)</td>
</tr>
<tr>
<td>Cuttack</td>
<td>2374 (78.2)</td>
</tr>
</tbody>
</table>
Increased prices have not lowered demand

Observers feel that compared to 5 years ago, the cost of all types of liquor has gone up substantially but alcohol consumption has not reduced. In places where traditional or illicit brews or cheaper legal country liquor has been supplanted by IMFL, these measures have not in any way reduced drinking—merely made drinking costlier. “Now people are consuming more expensive drinks”. This is a phenomenon we have observed before in other parts of the country: that demand is inelastic to pricing (Benegal 2005; Gururaj et al, 2006a,b; Benegal et al, 2008,2005; 2003). The explanation previously has been that drinkers in India shift to undocumented beverages when raised taxes on legal products make them costlier to afford. However, what we are now seeing challenges that traditional assumption. Paradoxically people appear to be quite willing to incur greater costs by shifting to costlier products as the availability of the cheaper undocumented options shrink.

Drinking contexts and expectancies

While for the most part the FGDs support the previous observations that drinking is mostly a solitary, under socialized affair. Drinking among men is mostly conducted outside the home and after work, with nearly 50% of their income being spent on alcohol. Alcohol use is not considered a liability in relation to work efficiency. The key attribution for alcohol use is that it relieves aches, pains and work related stress and tiredness and for pleasure seeking. But the FGDs also suggest that a great deal of the episodic heavy drinking may be occurring in the context of festive drinking - customs (drinking during festivals such as Diwali or Ugadi) and traditions (use of alcohol at times of death, marriage celebrations and birth of children) appear common. “Earning more money, peer approval, festivals, weddings and other social functions promotes alcohol use”. Indeed festive drinking appears to be more common than previously reported in India. Added to this heavy drinking of free alcohol distributed by political parties during frequent elections at local, municipal and national levels also figures as novel festive drinking occasions in these narratives. People also tend to blame ongoing changes in culture (‘adopting western lifestyles’) as a factor in adoption of drinking.

The survey similarly throws up a pattern of drinking marked by solitary drinking, never at home and usually never accompanying meals. About one in five drinkers – male and female also appear to have a fairly regular pattern of drinking on weekday evenings and mornings. These are patterns which are known to promote harm to the drinker and people in contact with the drinker.
Adverse consequences to the drinker

A third of male drinkers self-reported that their drinking had caused problems with their finances, physical health and social life. One of four said it had affected their carrying out household responsibilities and personal relationships. A considerable proportion of women users also reported adverse consequences of their drinking – with more than 20% reporting problems with finances, social life and physical health, and 10% or more reporting problems in their housework, marriage and relationships (Figure 3).

Around 15% of male drinkers reported a singular adverse event attributed to their alcohol use in the past year. This comprised incidents of getting into a serious fight, alcohol-related illness leading to absenteeism, spouse leaving or threatening to leave them, losing a job or losing a friend. The incidence of being arrested for drinking and driving was low – but understandable under circumstances where in most states in India, there is very poor implementation of drink-driving laws (Figure 4).
Hazardous Drinking - AUDIT Scores

The ratings on items pertaining to the questions on the Alcohol Use Disorders Identification Test (AUDIT) were added to produce a Total AUDIT score (sum of AUDIT items 1-10). The mean AUDIT scores among male users was 14.7 (7.8) [Range 1-33] and among female users was 4.3 (7.5) [Range 1-31]

| Table 3: Proportion of drinkers with Hazardous drinking [AUDIT > 8] |
|-----------------|-----------------|-----------------|
| Dhule            | Male            | Female          |
|                  | 66.7%           | 66.7%           |
| Gangtok          | 54.7%           | 40.8%           |
| Surat            | 39.8%           | 50%             |
| Vishakhapatnam   | 26.9%           | 40%             |
| Cuttack          | 44.8%           | 40.8%           |

It is not surprising given the predominance of heavy drinking in the population that more than 40-50% of all drinkers had AUDIT scores more than eight, placing them in the Hazardous drinking category. This is an observation that has been encountered earlier in numerous studies, documenting the high proportion of hazardous drinking in India. In fact, the Global Status Report on Alcohol and Health-2011 (WHO, 2011) rates India on the Patterns of Drinking Score, at 3. This composite measure of drinking patterns reflects how people drink instead of how much they drink, on a scale of 1 (least risky pattern of drinking) to 5 (most risky pattern of drinking).

Alcohol Use & Health Problems

Physical problems

Respondents in the household survey were asked to indicate specific disease conditions which had required them to seek treatment in the past year.

Alcohol users appeared to have a greater prevalence of some health conditions. The prevalence of most of the conditions in both groups was lower than expected in the population. However, one must remember that these are self reports and not derived from a medical screening for these diseases.

Nevertheless, it appears that in this sample, users had almost three times
the rate of sleep problems, twice the rate of presumptive heart problems and injuries than non-users. They also reported significantly greater rates of skin problems, jaundice, burning pain in the stomach, joint pains, chronic cough and fever suggestive of tuberculosis or chronic lung infections and other gastro-intestinal problems. One must guard against making any claim for causative links between alcohol and specific disease conditions from this data. But it certainly does appear that alcohol users had higher rates of illness than non-users.

**Greater medical problems associated with heavy drinkers**

![Graphs showing severity of alcohol use and illness](image)

**Figure 6: Severity of alcohol use and illness**

Also, the drinkers who reported accidents & injuries, chest pain & heart problems, and high blood pressure had higher scores on a composit quantity x frequency measure than those who did not report these ailments. A similar relationship was noted for Tuberculosis/persistent cough and evening rise of temperature. Heavy (and more frequent) drinking is associated with more frequent health conditions.

**Psychological problems**

Alcohol users were also significantly more likely to suffer poorer psychological well being on a variety of psychological indicators.

A lesser number of users reported feeling happy occasionally or more. More users reported difficulties (more than occasionally) – inability to enjoy activities, pain in the body, constant strain and losing sleep over worries.
Alcoholism and its treatment
Respondents on the FGDs do not seem to consider Alcoholism as a disease. The general belief is that it happens when people do not care enough to control their intake. Apart from religious beliefs / religion, stigma, social status and prestige prevents someone from accessing help; Women generally may not come forward for help and treatment.
Across the board, people are not aware of where to go for assistance or interventions for persons with alcohol related problems. This is also true even for health providers and doctors.

Table 4: Self reported withdrawal symptoms (Felt sick - shaking on cutting down/stopping)

<table>
<thead>
<tr>
<th></th>
<th>Cuttack</th>
<th>Dhule</th>
<th>Gangtok</th>
<th>Surat</th>
<th>Vishakhapatnam</th>
<th>all sites</th>
</tr>
</thead>
<tbody>
<tr>
<td>never</td>
<td>90.0</td>
<td>63.6</td>
<td>75.1</td>
<td>76.5</td>
<td>91.2</td>
<td>80.8</td>
</tr>
<tr>
<td>&lt;monthly</td>
<td>3.6</td>
<td>20.7</td>
<td>15.5</td>
<td>12.4</td>
<td>5</td>
<td>10.3</td>
</tr>
<tr>
<td>monthly</td>
<td>1.1</td>
<td>12.8</td>
<td>4.9</td>
<td>4.2</td>
<td>2.6</td>
<td>5.2</td>
</tr>
<tr>
<td>weekly</td>
<td>1.5</td>
<td>1.4</td>
<td>3.7</td>
<td>2.4</td>
<td>0.6</td>
<td>1.5</td>
</tr>
<tr>
<td>daily/almost daily</td>
<td>3.9</td>
<td>1.2</td>
<td>0.8</td>
<td>3.8</td>
<td>0.5</td>
<td>2.0</td>
</tr>
</tbody>
</table>

More than 5% of users reported experiencing withdrawal symptoms on stopping or cutting down- at least once a month or more, which can be taken as an indicator of probable dependent patterns of drinking.

Age at death
The study also collected data on deaths in the family in the past five years in the Family questionnaire. Among all deaths in the past five years, there was usable data on 638 deaths above the age of 25 years (Male=538; Female=100). There was a significant difference of the age at death of both male and female alcohol users (Figure 8):
a] male alcohol users had a significantly lower mean age at death than non-users (57.2 +14.2 years vs. 60.7 +15.5 years; t=-2.1, df316, p=0.04)
b] female alcohol users also had a significantly lower mean age at death than non-users (57.7+15.5 years vs. 61.6 +16.2 years; t=-1.98, df225, p=0.048).
Alcohol users in this sample appear to die about four years earlier than non-users. However, we must remember that these are small numbers and mere associations.
Treatment seeking

Health seeking (i.e. a composite measure of the frequency of treatment sought for health problems – both hospitalizations in the past year and outpatient treatment over the past 3 months) was higher among Infrequent high and Frequent high drinkers in all sites except in Vishakhapatnam (VSK).

Paradoxically, the rates of help-seeking for health problems among respondents in the VSK site were highest in the Infrequent Low drinkers. This may be a result of confusion over drink sizes, as noted above. VSK drinkers consistently rated low volumes and low frequencies and the category of Infrequent Low drinkers may conceal heavier drinkers.

Health Seeking and Health Costs

Alcohol users were more likely to have had a larger number of hospital admissions in the past 3 months and the past year. Additionally users reported a significantly greater number of admissions of family members in the past year. Like wise, alcohol users reported greater expenses related to hospitalization for themselves and their family members (Table 5).

Users also appeared to spend more on household expenses for medication for any ailment – and a greater proportion of users spent more than Rs. 1000 on medication in the past month than non-users.
This is significant because, not only do the costs from illnesses fall on alcohol users but their family members also seem to be at greater risk of illness or injury mounting additional health care costs.

**Alcohol Use & Socio economic issues**

Respondents on the FGDs strongly endorsed the belief that spending on alcohol and its consequences imposes a significant and additional economic burden in families with alcohol using members. They further feel that the burden is disproportionately borne by spouses and children. Loans taken on higher interest rates further push the families into a debt trap. People who have greater liquidity because of enrollment under various welfare/ job-guarantee schemes spend a large proportion of these payments on alcohol. “On the day the welfare payments are received, the recipient spends the whole day drinking alcohol and alcohol dues are paid out of these payments”

A clear association was made by respondents between greater availability of money and increasing alcohol use. A repeated refrain was that in areas where money supply had increased due to work for pay schemes like the Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA), alcohol use had increased as a large proportion of these earnings was spent on alcohol. This was especially clearly enunciated in sites like Andhra Pradesh.

Respondents in Sikkim, where the study was conducted after the major earthquake of September 2011, gave evidence that a large chunk of compensation payments was spent on alcohol. Similarly, members in Cuttack asserted that after every flood, flood relief benefits and payments contributed to an increase in alcohol sales in those areas.

**Reduced Spending on food and essentials**

The study collected data on several economic indicators, namely spending on essential Food and Non-food expenses (clothes, utensils, rent, electricity etc); on money spent on installment debt (house & auto loans, credit cards, micro-finance loans); on personal or hand loans and savings as a proportion of the family income. Across the board, users reported a smaller proportion of their income spent on food and essential items and savings and greater loans and debts.

A greater proportion of users (5.2%) than non-users (4.2%) reported having had to reduce consumption of food and essential commodities in the last five years (t=3, df 1, p =.048)

**Increased Debt & Reduced Savings**

A greater proportion of users (15.7%) than non-users (12.4%) reported having incurred significant debt in the last five years (t=18.4, df 1, p <0.0005). In a similar vein a greater proportion of users (5.9 %) than non-users (3.8%) reported having borrowed money with heavier interest in the past year (t=20.4, df 1, p <0.0005).

A greater proportion of users (77%) than non-users (73%) reported having incurred large amounts of non-routine expenses in the past year (t=22.6, df 1, p <0.0005)

Families with one or more alcohol-user reported greater economic problems than families of non-users i.e. without a single alcohol using member.

A greater proportion of user families reported regular concern (11or more times) in the past year regarding:

a] difficulty in buying food and essential items (11% vs. 6.9%; t=149.5, df 3, p < 0.0005);  
b] buying medicines and getting medical help (7.6% vs. 3.2%; t=156.9, df 3, p<0.0005);  
c] paying rent (4% vs. 2%; t=83.9, df 3, p<0.0005)  
d] paying children’s school fees compared to non-users (2.8% vs. 6.4%, df 3, p< 0.0005).  
e] difficulties with creditors (2.5% vs. 5.4%; t=157.1, df 3, p<0.0005)

| Table 6: Household expenses on medication (any ailment) in last month |
|-----------------|-----------------|-----------------|
|                 | Rs.1-1000       | >1000           |
| Non user        | 20.5            | 5.8             | 27.3, df1  |
| User            | 24.5            | 7.1             | .000       |
Reduced work efficiency and Productivity

<table>
<thead>
<tr>
<th>Table 7: Impact on Work Efficiency/ Productivity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Leave from work in the last year</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>None, 1-2 days, &gt;3 days</td>
</tr>
<tr>
<td>Non user</td>
</tr>
<tr>
<td>63.7, 25.6, 10.8</td>
</tr>
<tr>
<td>User</td>
</tr>
<tr>
<td>54.1, 25, 20.9</td>
</tr>
</tbody>
</table>

Users were also much more likely than non-users to have decreased efficacy or productivity at work as a result of greater absenteeism (10.8 vs 20.9 for more than 3 days) due to their self or having taken greater leave of absence due to a family member’s illness (Table 7).

Reduced Creation of Assets

An asset of household assets in the family was computed from a weighted list of household assets.

<table>
<thead>
<tr>
<th>Table 8: Assets owned</th>
</tr>
</thead>
<tbody>
<tr>
<td>Status</td>
</tr>
<tr>
<td>N</td>
</tr>
<tr>
<td>Mean</td>
</tr>
<tr>
<td>Std. Deviation</td>
</tr>
<tr>
<td>Std. Error Mean</td>
</tr>
<tr>
<td>t</td>
</tr>
<tr>
<td>df, p</td>
</tr>
<tr>
<td>non-user family</td>
</tr>
<tr>
<td>3183</td>
</tr>
<tr>
<td>18.1037</td>
</tr>
<tr>
<td>8.97706</td>
</tr>
<tr>
<td>.15912</td>
</tr>
<tr>
<td>3.432</td>
</tr>
<tr>
<td>5908, .001</td>
</tr>
<tr>
<td>user family</td>
</tr>
<tr>
<td>2727</td>
</tr>
<tr>
<td>17.3146</td>
</tr>
<tr>
<td>8.61192</td>
</tr>
<tr>
<td>.16491</td>
</tr>
</tbody>
</table>

Non-user families had a significantly larger asset-holding score than user families (Table 8).

Intangible costs

Intangible costs, generally refer to the pain, suffering, and the deterioration of quality of life and are difficult to estimate. In terms of intangible social costs–user families were compared to non-user families on a number of indices.

<table>
<thead>
<tr>
<th>Table 9: Lost opportunities (Children prematurely out of school)</th>
</tr>
</thead>
<tbody>
<tr>
<td>non-user family</td>
</tr>
<tr>
<td>50.8%</td>
</tr>
<tr>
<td>user family</td>
</tr>
<tr>
<td>56.8%</td>
</tr>
</tbody>
</table>

There were a significantly higher proportion of school-age children who were prematurely out of school in user families (Table 9).

In effect, not only alcohol users but also families of alcohol users, appear to suffer greater economic cost, in terms of both monetizable costs- reduced money spent on food and essential commodities, greater debt, greater costs due to absenteeism and lowered productivity, poorer creation of assets, less money for children’s education as well as unmonetizable social costs such as lost opportunities due to having to force children prematurely out of schools.

Harms To Others

Alcohol problems do not just affect the individual drinker; they always impact on other people and wider society. The burden of social harm from drinking alcohol is substantial. Alcohol is recognised as a contributory factor in a wide range of social problems including anti-social behaviour, crime, violence, domestic violence, strained relationships, family breakdown, child abuse and child neglect.

Intimate partner violence and violence towards children

The role of alcohol in greater domestic violence was recognized universally. “After drinking purposely fights for small issues and in vain, behaves violently with family and others”; “After drinks, who is wife and who is children! They are beaten squarely”. Ambivalent attitudes were also observed: “My husband is a good person when not drunk but after drinking he will simply fight with me without any reason, scream on children and no more peace is soon in the house”. “(Husband) often beats children when he is drunk, otherwise he is such a good father”. There appears to be a greater normalization and acceptance of alcohol use from rural
respondents and therefore less of causal attribution of alcohol as a factor in violence and other harm. Urban respondents appear to attribute a greater proportion of harm to alcohol misuse.

**Alcohol contributes to “public nuisance”**

FGD respondents felt that alcohol use contributed in many ways to ‘public nuisance’: “Creates a public nuisance by screaming in public places, fights with neighbours and friends”. Some respondents noted a more sinister connection between alcohol use and ‘engineered violence’: “Alcohol plays a vital role at the time of riots”. Others brought up the aspect of political parties using alcohol as an inducement for securing votes during elections. This study intended to document the adverse effects of drinkers in India on people other than the drinker as one of its major aims. In this direction we were guided by the directives of the international collaborative research initiatives on “Harm to others from drinking” which was initiated by the Management of Substance Abuse unit at the Department of Mental Health and Substance Abuse at the WHO headquarters. The current study was the first to use the WHO instrument on Harm to others from drinking, in a lower and middle income country. The results suggest that there are a considerable range of harms which affect persons in contact with alcohol users:

**Greater Harms to non-users in contact with alcohol using family members or friends**

<table>
<thead>
<tr>
<th>Harms to others (frequently and very frequently)</th>
<th>Contact with alcohol user - family/friends</th>
<th>X2, p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Argument</td>
<td>No</td>
<td>4.03</td>
</tr>
<tr>
<td>Violence</td>
<td>No</td>
<td>1.69</td>
</tr>
<tr>
<td>Emotional hurt</td>
<td>No</td>
<td>3.09</td>
</tr>
<tr>
<td>Physical hurt</td>
<td>No</td>
<td>0.5</td>
</tr>
<tr>
<td>Stopped seeing</td>
<td>No</td>
<td>2.32</td>
</tr>
<tr>
<td>At risk in car/vehicle</td>
<td>No</td>
<td>0.9</td>
</tr>
<tr>
<td>Injury-accident</td>
<td>No</td>
<td>0.23</td>
</tr>
<tr>
<td>Failed to do what was expected</td>
<td>No</td>
<td>1.90</td>
</tr>
<tr>
<td>Broke/damaged</td>
<td>No</td>
<td>0.7</td>
</tr>
<tr>
<td>Took money or valuables</td>
<td>No</td>
<td>3.8</td>
</tr>
<tr>
<td>Leave home</td>
<td>No</td>
<td>1.8</td>
</tr>
<tr>
<td>Spoilt social occasion</td>
<td>No</td>
<td>1.25</td>
</tr>
<tr>
<td>Didn’t do share of work</td>
<td>No</td>
<td>1.22</td>
</tr>
<tr>
<td>Gone without food</td>
<td>No</td>
<td>0.74</td>
</tr>
<tr>
<td>Embarrassment-don’t see friends/family</td>
<td>No</td>
<td>1.22</td>
</tr>
<tr>
<td>Forced/pressured into sex</td>
<td>No</td>
<td>0.25</td>
</tr>
<tr>
<td>Less money for household expenses</td>
<td>No</td>
<td>1.53</td>
</tr>
</tbody>
</table>

40% (n= 923) of male non-drinkers and 75% (n=1408) of female non-drinkers reported having close contact i.e. one or more persons in the family or among close friends who was a user. Such persons having contacts with alcohol users (in the family or among friends) clearly reported a significantly greater proportion of adverse events than persons without contact. This ranged from physical and emotional violence & injury, monetary loss, failure to live up to responsibilities, social embarrassment and physical deprivation (Table 10 presents comparisons restricted to people who experienced these harms frequently and very frequently). Alcohol misuse contributes to a wide range of harms to persons other than those who consume alcohol. This data ties in with the greater health problems and treatment seeking observed in family members of users.

**Extra responsibilities borne by non-drinking contacts**

<table>
<thead>
<tr>
<th>Harms to others</th>
<th>Contact</th>
<th>X2, p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spent time caring</td>
<td>No</td>
<td>3.62</td>
</tr>
<tr>
<td>Cleaning up after</td>
<td>No</td>
<td>3.44</td>
</tr>
<tr>
<td>Take on extra responsibility</td>
<td>No</td>
<td>4.60</td>
</tr>
<tr>
<td>Take family members elsewhere</td>
<td>No</td>
<td>3.05</td>
</tr>
</tbody>
</table>

Non-drinking contacts also had to bear extra responsibilities as drinkers failed to do what was expected of them or had to spend time caring for intoxicated or ill drinkers (Table 11).
The harms as noted before, also impact children and potentially impose major costs in terms of adverse developmental influences. These are essentially un-monetizable but nevertheless impose long term social costs (Table 12). In families with alcohol users, there was a disproportionately higher number of children (more than two times) of children facing violence (be it verbal or physical), children witnessing violence or being left in risky situations. Children in alcohol using families were almost at three fold greater risk of having less money for childcare!

### Harms to non-drinkers from strangers’ drinking

Harms are not restricted to family members, friends and co-workers. They affect the community at large. The data suggests that individuals in society are adversely affected by the consequences of drinking in strangers. This ranges from being kept awake at night due to the behaviors of intoxicated strangers to being physically molested or hurt because of intoxicated strangers.

Half of the respondents interviewed (n=8333) reported having been troubled by strangers’ drinking. A third had gotten into serious arguments.

#### Harms to children

<table>
<thead>
<tr>
<th>Table 12: Harms to others – Impact on children (Monthly+weekly)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Contact</td>
</tr>
<tr>
<td>No</td>
</tr>
<tr>
<td>Child left in risky situation</td>
</tr>
<tr>
<td>Child yelled at</td>
</tr>
<tr>
<td>Child physically hurt</td>
</tr>
<tr>
<td>Child witnessed severe violence</td>
</tr>
<tr>
<td>No money for childcare</td>
</tr>
</tbody>
</table>

#### Harms in the workplace faced by non-drinking co-workers

<table>
<thead>
<tr>
<th>Table 13: Harms to others – Impact of co-workers’ drinking</th>
</tr>
</thead>
<tbody>
<tr>
<td>Contact with someone who drinks</td>
</tr>
<tr>
<td>No</td>
</tr>
<tr>
<td>Work extra hours</td>
</tr>
<tr>
<td>Ability to do job negatively affected</td>
</tr>
<tr>
<td>Involved in accident at work</td>
</tr>
<tr>
<td>Productivity reduced</td>
</tr>
<tr>
<td>Had to cover for</td>
</tr>
</tbody>
</table>

All this, as we have reported earlier (Gururaj et al, 2006a) contribute to a huge economic burden attributable to alcohol misuse. 1/3 of non drinking contacts also reported that they had to compensate for alcohol using co-worker by working extra hours; almost a forth had to cover for inefficient alcohol using co-workers. Almost 10% reported having reduced ability to do their own quantum of work because of alcohol using co-workers.

#### Harms to non-drinkers from strangers’ drinking

Harms are not restricted to family members, friends and co-workers. They affect the community at large. The data suggests that individuals in society are adversely affected by the consequences of drinking in strangers. This ranges from being kept awake at night due to the behaviors of intoxicated strangers to being physically molested or hurt because of intoxicated strangers.

Half of the respondents interviewed (n=8333) reported having been troubled by strangers’ drinking. A third had gotten into serious arguments.

**Figure 10:** Harms experienced due to strangers’ drinking – irrespective of personal drinking status
with intoxicated strangers or been abused / threatened, around 20% reported feeling unsafe in public places or public transport. More than one out ten people had suffered physical abuse / violence, been involved in road traffic accidents, suffered damage to property due to intoxicated strangers.

Despite high rates of the nuisance effect of strangers’ drinking, it is surprising that only a small proportion of people seek legal recourse to combat the problem. Only 2.7% of persons in direct contact with drinkers and 1.6% of persons without direct contact reported having called the police for troubles with a drinking person.

### Associated Risk Factors

#### Tobacco use

<table>
<thead>
<tr>
<th>Tobacco use</th>
<th>None</th>
<th>Yes</th>
</tr>
</thead>
<tbody>
<tr>
<td>non-user</td>
<td>68.1%</td>
<td>31.9%</td>
</tr>
<tr>
<td>user</td>
<td>37.7%</td>
<td>62.3%</td>
</tr>
</tbody>
</table>

Type of tobacco use

<table>
<thead>
<tr>
<th>Type of tobacco use</th>
<th>None</th>
<th>smokeless</th>
<th>smoke</th>
<th>both</th>
</tr>
</thead>
<tbody>
<tr>
<td>non-user</td>
<td>78.7%</td>
<td>11.2%</td>
<td>7.2%</td>
<td>2.9%</td>
</tr>
<tr>
<td>user</td>
<td>34.9%</td>
<td>29.5%</td>
<td>22.0%</td>
<td>13.6%</td>
</tr>
</tbody>
</table>

There was greater prevalence of tobacco use among alcohol users compared to non-users (Table 14)

#### Use of pharmaceutical agents greater among user men and abstaining women

20.2% of male drinkers compared to 13.5% male non users reported using pharmaceutical agents – like benzodiazepines (Calmpose/ Alprax etc) or opioid pain medicines (Proxyvon etc.) monthly or more. The reverse was seen among women with 9.9% of female drinkers vs. 13.8% of female abstainers reported monthly or more frequent use of these substances.

#### Illicit drug use greater among alcohol users

Use of illicit drugs among users (4.4%) was more than twice that among non-users (1.8%)

#### Illicit alcoholic beverages and problems

Pooling the data on alcohol users from all sites – 60% of males and 30% of females drank IMFL as their first preference. 40% of males and 70% of females indicated beverages which constitute the undocumented sector as their usual or first preference. Of course, this is a simplification as the observation hides the fact that in centres like Gangtok and Cuttack there was increased prevalence of traditional brewed beverages. In Dhule, Cuttack and Surat, there was a great deal of use of illicit spirits. However, the 40% average prevalence of undocumented alcohol is similar to previous estimates from Karnataka and Punjab (Benegal et al.; Singh)

Figure 11: Proportion of Indian Made Liquor, traditional brewed drinks and illicit spirits endorsed as the drink of first choice by male and female drinkers in the sampled population
The undocumented beverages – actually comprise traditional home brews – like chaang, toddy, etc. as well as distilled spirits. The distilled spirits are often known to be produced using questionable manufacturing methods or even have toxic additives mixed to increase potency. The frequent episodes of “hooch tragedies” in India, which occur mostly due to methanol poisoning, have convinced most that the “illicit” alcoholic beverages are uniformly toxic. While it is usually been taken for granted that the factory produced, quality controlled IML beverages are “healthier” than the undocumented beverages, some of the studies which have incidentally looked at this matter do not provide unequivocal proof of such an assertion.

**Treatment seeking among consumers of licit and illicit beverages**

We looked at the prevalence of treatment-seeking for ailments as an indicator of the health status of users.

![Frequent Treatment seeking](image)

Figure 12: Greater proportion of illicit spirit consumers than IML consumers reported frequent and regular treatment seeking in the past year. Consumers using traditional brews had the lowest frequency of treatment seeking among users.

Surprisingly, the prevalence of frequent treatment seeking was least among persons drinking the traditional brews; IML drinkers reported more than one and a half times more and illicit spirit drinkers almost three times more.

On the topic of undocumented and illicit beverages: there is a great deal of concern about ineffective implementation of existing laws pertaining to alcohol control. FGD respondents from all sites reported that the local administration and excise was taking a lax approach presumably because of the greater economic returns from sale of alcohol. People from Surat were near-unanimous that prohibition either partial or complete is practically difficult. “jisko chahiye hota hai wo jagada kar hi letah” (whoever wants can manage to get it...). In Surat, even members of the police and judiciary, openly admit that prohibition exists only in name, and that members of their professions are actively conniving with persons breaking the prohibition on alcohol.

**Age of onset of use and its consequences**

Respondents in the FGDs commonly expressed their concern about increasing use of alcohol by students and youth in both urban and rural areas. The general feeling is that there was more ‘under-age’ drinking than before, because of greater availability, greater social acceptance, increasing social aspirational values attached to drinking – which some blamed on globalization and exposure to satellite television, as well as alleged push-sales to young people by alcohol manufacturers through advertising and introduction of newer beverages, such as mixed drinks. They reported that beer or alco-pops (Bacardi Breezers) were usually the first beverages adopted. There was near unanimity in the need to discourage youth from starting early. “Drinking could be started after the age of 25 to 26 years when the person has become
financially independent’ says a sarpanch in Ludhiana; another respondent from Vishakhapatnam alleges that “students sometimes steal from the father’s cupboard to buy alcohol!”

Young onset alcohol users – here defined as those who began regular drinking before the age of 21 years, constitute more than half the population of drinkers in the survey. The young onset drinkers also have almost double the prevalence of frequent high drinking. Adolescent drinkers also had greater frequency of some health problems. 13.1% of adolescent drinkers (n=160) compared to 4.3% of adult drinkers (n=3516) reported severe injuries sustained in the past year.

Gender and alcohol use
The greater proportion of alcohol users remains men; drinking among women is still uncommon and stigmatized, except in households where women are encouraged by spouses and other male figures to drink alongside their men folk. The exception is Sikkim where there appears to be a larger tolerance and traditional acceptance of women’s drinking. Yet drinking by women is allowed under special circumstances – for example in Puducherry and other places in south India - brandy is given to a woman in her post-natal period to overcome the pain and prevent ‘cold’ humors’. There are reports from numerous sites that there has been increasing use of alcohol by women, predominantly related to the ‘empowerment’ and availability of money especially in urban areas. In rural areas alcohol use is related to specific occupations (toddy tapping) or in certain communities, especially in Surat, where historically some communities have tolerated alcohol use by women. However, alcohol use among women was generally still looked down upon: “(women) drinking will adversely affect child rearing and ruin the family. Such girls find difficulty in getting married. It is not good for her safety and culture. Her drinking is a big societal loss”.

Discussion
The overarching purpose of this study was to explore the impact of alcohol use on harm to the user as well as to persons in contact with the user. While it is widely accepted that harms to the drinker through his/her own consumption is common and considerable, the evidence for harms that accrue to non-users in contact with drinkers, is still largely anecdotal.

International studies on harms from alcohol, make a careful distinction between heavy drinkers and moderate drinkers – and consistently document harms to heavy drinkers. In the Indian context, this distinction has been difficult to uphold, as previous studies have repeatedly shown that the signature pattern of drinking in India is marked by frequent-heavy or episodic-heavy drinking of spirits, in non-convivial solitary circumstances, complicated by expectancies which favour drinking-to-intoxication and disinhibited behaviors. The information gathered from both the qualitative and quantitative survey arms of this study, reinforce these notions. The predominant pattern of drinking is one of heavy (high volume) drinking – whether frequent or infrequent.

The study gathered data from twelve sites (states) in the country (survey data from five sites). The information from Surat, probably represents the first systematic exploration of alcohol use in a state under long-time prohibition. While the information from each state presents various diversities, this report which is a first iteration of data acquired from the FGDs and survey information from 8567 families concentrates on a few common indicators of harm.

Alcohol use is associated with greater morbidity. Alcohol users had greater sleep problems, presumptive heart problems and injuries than non-users. They also reported significantly greater rates of skin problems, jaundice, burning pain in the stomach and other gastro-intestinal problems, joint pains, chronic cough and fever suggestive of tuberculosis or chronic lung infections. One must guard against making any claim for causative links between alcohol and specific disease conditions from this data. But it certainly does appear that alcohol users had higher rates of illness than non-users. Heavy users had a greater prevalence of these problems than light users.
It is known that alcohol is a causative or complicating factor in more than 70 non-communicable disorders. In this context, the global strategy for prevention and control of NCDs as set forward by the WHO has identified reduction in harmful use of alcohol as one of the most cost-effective interventions for NCD prevention [1]. Global status report on NCDs, 2010]. Participants of the recent WHO SEARO Regional meeting on noncommunicable diseases at Yangon, 2012 endorsed the following two indicators for monitoring programmes on the reduction of NCDs in the region: 1]. Monitoring adult per capita (APC) consumption of alcohol; and 2]. Reducing the number of heavy episodes of drinking. They further recommended that the target for APC should be a 10% relative reduction in persons aged 15+ years by 2025 and that the target for heavy episodic drinking should be a relative reduction of 5% by 2025. In the context of India, which is about to initiate an ambitious National Programme on NCDs, one of the ways this might be achieved could be incorporating early detection of alcohol related health problems and brief advice /intervention programmes as an integral part of screening for NCDs and treatment at primary health care levels. The conventional wisdom of reducing APC by raising taxes, may not be as effective in the Indian context, as the indications from this study and also other studies suggest that consumption may have gone up despite reducing access to undocumented beverages and increasing prices of legal beverages.

A greater proportion of alcohol users also reported more psychological problems. The links between heavy alcohol consumption and mental disorders has been reported earlier. The data from the current study suggests that current and future programmes on recognition and treatment of mental disorders embed alcohol screening and control measures into their routine procedures. Alcohol control strategies thus need to be promoted as an integral part the District Mental Health Programme of India. The Executive Board of the WHO in its Resolution (EB 130.R8) in 2012 has recognized the global burden of mental disorders and the need for a comprehensive, coordinated response from the health and social sectors at country level, and asked WHO to develop a new action plan relevant to all countries. Alcohol control has been included in the draft resolution as an important strategy within the action plan.

The study also collected data on family members who had died in the last five years along with a simple query as to whether they had regular use of alcohol and/or tobacco. Among 231 deaths on whom complete data was available, alcohol users had a significantly lower age at death compared to non-users. While this data can by no means be construed to imply causality, and also, the numbers are small; the association of alcohol use and earlier age of death is striking.

In the monitoring framework for the prevention and control of non-communicable diseases, the World Health Organization has recently removed the target to reduce per capita alcohol consumption. The first draft of the framework included a target to achieve a 10% relative reduction in per capita consumption of litres of pure alcohol among persons aged 15+ years. The removal of the per capita alcohol consumption target was apparently due to concerns from Member States that it is not a valid proxy of harmful alcohol consumption. The results from the current study would strongly argue against such moves. We hope that these results can be used to highlight the strong association between alcohol misuse and disease, especially non-communicable disorders, in our region (South Asia) and further endorse that these results be publicized in Public Health campaigns as well as rationale for including alcohol interventions in Non-Communicable Diseases Initiatives of the Government of India and SEARO.

Alcohol users also had significantly higher number of hospital admissions and consultations for health problems with both primary health care and specialist providers. It follows that their spending on health was also significantly higher both in short and long term. Intriguingly, not only the users themselves, but also other family members had greater health problems and more consultations for health seeking than family members of non-users. Household expenses for medicines was also higher among alcohol users.

Alcohol users reported that they were worse off on a variety of economic indicators than non-users. They reported spending a lesser proportion of their and their family income on food and essential non-food items (clothes, utensils, rent, electricity etc.). They reported having heavier loans and debts and being able to allocate a smaller proportion of their earnings to savings. Users also reported have difficulties with creditors,
greater difficulty in buying food and essential items, paying rent and paying children’s school fees compared to non-users. Users were also much more likely than non-users to have decreased efficacy or productivity at work as a result of greater absenteeism due to their self or having taken greater leave of absence due to a family member’s illness. This contributes to greater social cost, as it reduces the family’s available finances as well as contribute to cumulative lowering of industrial productivity.

Reflecting what is most readily available in the underlying health system statistics, measures of problems from alcohol consumption, including estimates of alcohol as a risk factor in the Global Burden of Disease, have primarily focused on harm to the drinker’s health. Yet it is clear that drinking often also causes harm to the health and welfare of others around the drinker – to family members and friends, and to others in the community and more broadly. Recent studies in a few high-income countries have begun to measure and document the extensive nature and magnitude of these harms, but research data from low- and middle-income countries is scattered. Building on these studies, WHO has identified a research initiative on Harm to Others from Drinking as a major strand in the Research Initiative on Alcohol, Health and Development under the Global Strategy to Reduce the Harmful Use of Alcohol. The current study, therefore also undertook to assess the adverse impact of the drinking on others: for instance, problems with a spouse/partner, with relatives, with friends or neighbours, on the job or with workmates, and with the police. The present study draws on the experience of recent Australian and New Zealand studies and on the substantial experience of the GENACIS study. The current study is the first use of the WHO instrument on Harms to Others (H20) in a lower and middle income country.

As will be immediately apparent, the data strongly suggests, that a large proportion of people in contact with one or more alcohol user, were subject to a comparatively larger number of adverse events, than people without such contact. The adverse events included forced sex, being put at risk in a car/vehicle, having social occasions spoilt, having to leave home for their safety, broken or damaged property, injuries and accidents, violence and emotional hurt, and other such harms. Persons in contact with alcohol users also reported a greater prevalence of incidents when they had to take on extra responsibilities, spend time caring for an unwell relative. Families with alcohol users also had a two-fold greater experience of adverse impacts on children: children witnessing or suffering violence, being left in risky situations and having less money for childcare.

Across the board, regardless of family contact with an alcohol user, a third of the population surveyed had experience of having to work extra hours to cover for a colleague or workmate’s drinking. A large proportion reported having their productivity reduced and being involved in accidents at work.

Half of the entire population sampled had been disturbed by a stranger’s drinking. Almost 30% complained of having been abused or threatened. Almost a quarter had gone out of their way to avoid drunk people or places where drinkers hang out. 20% complained of feeling unsafe while using public transport or in any public place or been annoyed by people vomiting, urinating or littering after drinking. More than 10% had been involved in a traffic accident because of someone else’s drinking.

This “secondary harm” from alcohol, which can be compared to the harm to non-smokers in the vicinity of smokers (secondary smoking) is a departure from the traditional way of looking at alcohol related harm – as a crime without a victim!

Users of undocumented alcoholic beverages (illicit spirits, traditional beers and wines) clearly had greater adverse health consequences than documented alcohol users. Especially, affected were the gastro-intestinal system, cardiovascular system, respiratory system with complaints suggestive of tuberculosis, sleep problems, arthritis etc. The respiratory symptoms (chronic cough with fever) suggestive of tuberculosis are significant as there is a previous study which has implicated alcohol misuse with delayed diagnoses of tuberculosis in India (Gajalakshmi & Peto, 2009).

Not surprisingly, alcohol users were also more likely to be tobacco users as well as more likely to abuse other substances, especially pharmacological compounds (medicines used for sleep or sedation like benzodiazepines and pain medicines or cough mixtures containing opium like drugs) which require a prescription for their purchase are nevertheless often available across the counter across India. Almost a third of alcohol users used pharmacological agents like benzodiazepines, opioid pain medicines /cough medicines. What was surprising was to find that such substance use was also common in 20% of the non-alcohol using population. Alcohol users were more likely to be using illicit drugs. However the absolute numbers of persons
using illicit drugs was very low. Thus highlighting the preventive paradox, wherein, alcohol which is clearly the drug that causes the greatest adverse public health impact, receives much less attention than illicit drugs, with lesser actual impact.

Alcohol users had a two-fold higher prevalence of gambling. They were seven times more likely than non-users to have gambling which could be characterised as problem gambling. However, the prevalence of gambling does seem rather low when seen in the context of the gambling market in India. However, there are no epidemiological studies of gambling for us to benchmark these figures against. Further iterations of the data need to be pursued separately for gender, age and other effects.

Limitations
The study assessed patterns of use and adverse health and socioeconomic consequences of alcohol misuse in five different states of India. These roughly covered the North-East, Central, South, West and East of the country. The areas were chosen as very little work had been done in these areas. Gujarat of course, was chosen to understand the complexity of alcohol use in a state under prohibition for many decades. Nevertheless considering the diversity of India, the study cannot be considered truly nationally representative. The project plan required numerous adjustments in the original sampling plan, methodology and timelines. The project duration was reduced from 12 months to 8 months because of procedural delays in sanctioning of the project and delays on account of local ethical clearance. Natural calamities caused inordinate delays in initiation of the project in 2 of the 5 chosen sites. Gangtok (Sikkim) was severely affected by the North-Eastern earthquake of September 2011. Orissa was ravaged by floods. This led to a further delay of 3 to 4 months for project initiation in these sites. These unforeseen events almost jeopardised the entire project, but it was collectively decided that rather than abandon the project, valuable information could still be obtained by: i) reducing the number of house to house surveys, and, b) increasing the number of sites for focused group discussions. Since the original sample estimate was kept at a very high level of 5000 families from each site, when the minimum effective sample size was calculated at around 700. It was felt that it would be practically possible to get effective numbers by sampling around 1400 families per site. The sample size per site was thus fixed at the inflated estimate of 2000. It was also recognized that the effective sample sizes required in Sikkim where the prevalence of alcohol use was more than 40% of all adult males (NFHS-3), we could afford to have a lower sample size which was set at 700.

Recommendations
The harm from alcohol is recognized, but measures of problems from alcohol consumption, have primarily focused on harm to the drinker’s health. Yet it is clear that drinking also causes harm to the health and welfare of others around the drinker – to family members and friends, and to others in the community and more broadly. Interventions to reduce harm from alcohol cannot therefore be limited to reducing heavy consumption in the population or engaging heavy drinking individuals in cessation treatments. The available evidence clearly points to the fact that harm to drinking individuals and persons in contact with them are not restricted to the context heavy drinkers or alcohol dependent individuals alone. Yet the bulk of initiatives to reduce harm have focused on getting the heavy drinking or alcohol dependent individual to cease drinking leading to an over reliance on creating deaddiction centres and rehabilitation centres. This as the sole strategy has been unhelpful in its societal impact.

1) The association of alcohol misuse with increased health problems, suggests that screening and brief intervention as part of routine medical care needs to be urgently implemented. Identification of alcohol as a key risk indicator for NCDs by the UN High Level Political Declaration and the WHO targets for alcohol control provides a background for the Indian governments large scale initiative on NCDs. We suggest that alcohol control measures be embedded in the NCD agenda in India in order to include screening and brief intervention for alcohol during routine primary health care and emergency room visits and that brief alcohol interventions be part of community care delivery by agents such as ASHAS and community nurses.

2) Screening for alcohol related harm needs to be integrated with other ongoing or planned health and welfare programmes. This will necessitate forming linkages with a wide array of programmes for women and child welfare; economic welfare and employment guarantee schemes, school health initiatives, lending organisations and micro finance institutions. The personnel involved in these schemes (often far
removed from concerns about alcohol control) need to be sensitized to the role that alcohol misuse in their beneficiaries or persons in contact with them, may play in the success of their programmes.

3) The priority needs to shift to adoption of population level measures - reducing average consumption through control measures such as taxation, delaying age at first drink by enforcing existing drinking age norms, reducing drinking and driving etc. The target for APC as recommended by the Recent SEARO meeting in Yangon 2012 should be a 10% relative reduction in persons aged 15+ years by 2025 and that the target for heavy episodic drinking should be a relative reduction of 5% by 2025. In the context of India, which is about to initiate an ambitious National Programme on NCDs, one of the ways this might be achieved could be incorporating early detection of alcohol related health problems and brief advice /intervention programmes as an integral part of screening for NCDs and treatment at primary health care levels. The conventional wisdom of reducing APC by raising taxes, may not be as effective in the Indian context, as the indications from this study suggest that consumption may have gone up despite reducing access to undocumented beverages and increasing prices of legal beverages.

4) Similar to the construct of secondary smoking –secondary harms due to alcohol exert a disproportionate cost on persons in contact with drinkers and a cumulative cost on society. This concept of secondary harm from alcohol needs to be introduced into the popular discourse and widely disseminated via popular media. In the same way that awareness of the harms of secondary smoking galvanized the advocacy against smoking, “secondary drinking” may be used to strengthen alcohol control advocacy.

5) Alcohol control strategies thus need to be promoted as an integral part the District Mental Health Programme of India. Such an initiative we hope will receive support from the deliberations which will follow the WHO Executive Board Resolution (EB 130.R8) and the efforts of mHGap.

6) Setting based interventions in workplaces, communities, educational institutions and families should be systematically applied by shifting from individual based approaches. Life skills training should be promoted in schools and colleges across the country informing about the harmful effects of alcohol use at younger ages. These programmes should not only help in limiting entry to alcohol use but also be geared towards coping with situations in families / peer groups / others where there are alcoholic individuals.

7) Public health research and initiatives needs to be strengthened in specified areas of examining the burden and impact of alcohol with funds available with the government through taxation. It has been earlier suggested that a health promotion fund, paid in part from alcohol excise earnings, can to be set up to initiate activities in this area. Research inputs are required to persuade policy planners to shift to a public health model. Registries in designated centres need to be set up across the countries to track the evolving alcohol problem and its associated effects.

8) All measures will fail in the absence of adequate trained man-power. Human resource development and capacity strengthening are required across the sectors of health, police, welfare, transport, law to address measures for early interventions. This should be a skills development/enhancement programme rather than theoretical programme.

9) The question of the desirability of total prohibition as an alcohol control measure in India, remains an extremely sensitive issue. The evidence from Surat presents an equivocal picture. While prohibition has resulted in reduced prevalence of use, it has increased the use of toxic and undocumented (illicit) beverages. It has also created a vast underground mafia to service the demand for alcohol. Harms from such patterns are sizeable to both users and their contacts.

10) The interventions need to be developed as universal, high risk and selective, depending on the extent of alcohol abuse. Universal interventions should be geared towards restricting initiation into alcohol, while high risk strategies should include measures for affected individuals. Selective interventions would be for those with an established alcohol problem. These interventions need to be systematically evaluated in select communities.

11) Well targeted and focused mass media campaigns on a continuous nature need to be put in place to inform the society of the harm from alcohol. Such programmes should focus on presenting the merits of reduced consumption along with the dangers of heavy alcohol use and be used supplement other control measures rather than constitute isolated one time activities.

12) It is very vital that communities at local level are empowered to face and address growing alcohol problem in a meaningful way. Ultimately, the direction in which Indian community wishes to move by recognizing dangers from alcohol will shape upcoming policies and programmes.
References


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Annexure 1: Sampling Methodology

a) The Survey was planned to be undertaken in both rural and urban areas. To achieve this it was planned to sample from the rural and urban field practice areas adopted by medical colleges in the designated sites.

b) A case – comparison approach was to be adopted.

c) 1400 (700 alcohol users and 700 non users (350 from Non users households and 350 from within users households)) families in rural areas and 600 (300 users and 300 non users (150 from non users households and 150 from within users households)) families in urban areas to be interviewed

d) Within each site in urban - 10% should be from high income, 50% from middle income and 40% from low income households. Similarly pattern in rural to be decided on local data.

e) Selecting the survey area

Urban:
- Obtain the map of the area
- Exclude predominantly commercial areas
- Demarcate the Census Enumeration Blocks (CEB) amongst the rest of the urban locality
- Number the CEB serially and select four CEBs randomly
- Using standard techniques, survey alcohol user households and comparison households as detailed below (Figure 1).
- If the CEBs are inadequate to realise the sample size, select one more CEB randomly

Rural area:
- Obtain area map of the PHCs under the Medical college and obtain the list of villages along with their population sizes.
- Identify villages which have a 1000 to 5000 population (about 200 to 500 households)
- Serially number each of the villages and select the first survey village randomly by simple lottery method without replacement
- In the selected village, using standard methodology, survey alcohol user households and control/comparison households as detailed below (Figure 1).
- If one village is insufficient, select the next adjacent village
- Random walk method to be used to identify the first household.

f) Alcohol user for this study is defined as “any person aged between 15 to 65 years, who has consumed/reported to have consumed alcohol of any type during the last one year”.

g) Selection of individual alcohol user

- Wherever a female alcohol user is identified, she needs to be preferentially interviewed
- Wherever a male alcohol user less than 25 years is identified, he needs to be preferentially interviewed
- If there are more than one male adult (>25 year old) alcohol users in the household, then beginning with the senior most alcohol user member of the family, each alcohol user is given a serial number starting with 1. The respondent is picked up using a simple lottery method without replacement.
- Circuit breakers: Female alcohol users and under 25 alcohol users to constitute about 50% of the total sample (25% each)
- In rural area of the total 700 users to be interviewed a maximum of 175 female alcohol users and 175 under-25 alcohol users to be interviewed
- Likewise in urban areas of the total 300 users to be interviewed a maximum of 75 female alcohol users and 75 under-25 alcohol users to be interviewed
- If there are more than one user in any particular category, the person to be interviewed to be identified by a simple random method.
- In case the numbers are inadequate for female alcohol users or under-25 male alcohol users, DO NOT SAMPLE THE NEXT VILLAGE/AREA BUT COMPLETE THE TOTAL REQUIRED NUMBERS FROM ADULT ALCOHOL USERS in the same village. This is to avoid the denominator problem subsequently during analysis and in all, to study the pattern of alcohol use we need at least 1000 adult users from each site. Please note the sample size for prevalence has used a different parameter.

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<tr>
<th>Category</th>
<th>High Income (10% = 30)</th>
<th>Middle Income (50% = 150)</th>
<th>Low income (40% = 120)</th>
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<td>Maximum female alcohol user</td>
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<td>40</td>
<td>30</td>
</tr>
<tr>
<td>Maximum underage male user</td>
<td>8</td>
<td>40</td>
<td>30</td>
</tr>
<tr>
<td>Other adult male user</td>
<td>15</td>
<td>75</td>
<td>60</td>
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</tbody>
</table>

RURAL (TOTAL SAMPLE NEEDED = 700)

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<tr>
<th>Category</th>
<th>High Income</th>
<th>Middle Income</th>
<th>Low income</th>
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<tr>
<td>Maximum female alcohol user</td>
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<td>Maximum underage male user</td>
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<tr>
<td>Other adult male user</td>
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</table>

a. A minimum of 3 repeat visits to be made at convenient times (early morning, late evening, on Sundays and holidays) before declaring the person as non-responder.

b. A replacement for the non-responder is made at the end of the study period.

c. Age, sex, occupation and reason for non-response to be documented for each non-responder separately.

d) Sampling: The numbers for control/comparison have been based on the assumption to detect at least an OR of 4 between users and nonusers at 95% CI and 80% power

i) Selection of the control or comparison

a. Two types of control/comparison to be selected

i. Within alcohol user household (350 in Rural; 150 from Urban)

The objective is to capture the harm to others within the alcohol user family.

ii. From alcohol non user household (350 in Rural; 150 from Urban)

The objective is to compare the overall harm to user family in comparison to non-user family.

b. For within alcohol user household comparison,

i. If there is a female alcohol user, it is expected that the HOH would also be a user; hence the HH is to be used as case only
ii. In non female alcohol user HH, the adult non alcohol user female who manages the household needs to be interviewed. The rationale being that this ‘responsible respondent’ would be much more aware of the harm to the household than the male.

c. For the alcohol non user HH, the comparison / control is sex and age (± 3 years) matched individual living in the adjacent house / same street / or in the immediate neighbourhood and in that order of priority.

d. Life time alcohol users but currently abstainers are to be included as alcohol non-user control

e. A minimum of 3 repeat visits to be made at convenient times (early morning, late evening, on Sundays and holidays) before declaring the person as non-responder.

f. A replacement for the non-responder is made at the end of the study period.

g. Age, sex, occupation and reason for non-response to be documented for each non-responder separately.

In the context of the geography of the state of Sikkim and its relatively higher prevalence rates (~ 65%), there is no change in the sampling plan. The only difference would be in terms of the greater number of villages that would get sampled. After the first random selection, contiguous villages to be selected till the required sample sizes are reached. Any shortfall in the number of controls would be dealt as a specific limitation and would be interpreted accordingly.

**Note:** The primary focus is the number of cases; once the required numbers are reached, please do not go to the next village / area in selection of controls. Going to the next village in search of controls would create problems in denominator. Even, if part of an area / village is covered, we have the SD details of the individual HH for purposes of calculation. Only the total population of that village is needed. Any shortfall in the number of controls would be dealt as a specific limitation and would be interpreted accordingly.

The steps (Figure 1) for the interviewer after going to the identified locality and identified household:

1. Obtain SD details using the household / family questionnaire
2. Check alcohol users within family,
3. If no users present, consider for control
4. If female alcohol user present, interview using individual questionnaire
5. If female alcohol user not present, check for underage male alcohol user
6. If underage male alcohol user present, interview using individual questionnaire
7. If underage male alcohol user not present, list all adult alcohol users
8. Randomly select one adult male user and interview using individual questionnaire
9. If underage male alcohol user or adult male alcohol user interviewed, identify the female responsible respondent of this HH
10. Interview the female responsible respondent (non user) of the alcohol user HH interview using individual questionnaire

**Identifying non user control (illustrative):**

HH 1 has 3 members 38 year old female alcohol user along with 45 year old husband (also a alcohol users) and 15 year old son (non user). The HH is considered alcohol user HH and the 38 year old female alcohol user is preferentially interviewed.

In HH 2, there are 2 members 50 year old Male and 46 year old female both not using alcohol. Then the HH is a non user HH and considered as control HH. As there is no 38±3 year female alcohol non-user in that HH, keep it still under consideration

In HH 3, there are 5 members: Husband (48 year old, alcohol user), Wife (30 year old alcohol non user), Two children (10 and 13) and Wife’s father (60 year old, alcohol user). It is an alcohol user HH as there are two adult male alcohol user. By random process, the 48 year old male gets selected. You will be interviewing the 48 year old male and also the wife for individual interviews; two separate forms need to be used. The HH2: 50 year old male is the control for this 48 year old male.

So go back to HH2 and interview the 50 year old male with the individual form.

In HH 4, there are 3 members: 45 year old husband, 39 year old wife and 19 year old son. The HH / family form indicates that only the 19 year old is an alcohol user. Then the HH is an alcohol user HH and the 19 year old son to be preferentially interviewed using the individual questionnaire. The 39 year old wife is to be also interviewed using the individual interview form.

In HH 5, there are 5 members: Husband (45 year old, alcohol non user), Wife (40 year old, alcohol non-user), three children (21 year male, 17 year female and 13 year male, all alcohol non users). So this HH is considered for control. In this HH, potentially there are three controls: 45 year old husband, 40 year old wife and 21 year old male. Use the earlier preferential order (female, male < 25 and adult males) and interview the 40 year old female non user as control for HH 1 38 year female user.

Practically, on day 1 of the survey in the new area complete the HH / family form for as many HH as possible. In case of the user family without a female user, complete the user individual form and female non user individual form. Once you have got a good collection of interviews regarding user families and individual forms, record the details in the interviewer daily form.

On day 2 of the survey in the same area - Preferentially finish the pending interview of the previous day; Check for suitability of control from the non alcohol user HH; Interview an appropriate control keeping the above points

Survey of other HHs to be continued

During the weekly review -

a. Check for pending interviews both user and non users
b. Check whether, each case (alcohol user) has been matched
c. Check whether, the requisite numbers are achieved in each individual category

Thus during the weekly review, you will be needing
d. The interviewer daily records sheet
e. The interviewer weekly summary sheet
f. The Co-ordinator weekly summary sheet which also includes the cumulative number of interviews completed till date in that particular area.

Please do maintain a separate log for the coordinator quality assurance system
Annexure 2

Family Questionnaire: WHO – NIMHANS Collaborative Project on Health & Lifestyle [India site] –

Site ☐ Area ☐ Family No ☐ ☐ ☐ ☐
State: Cuttack-1; Surat-2; Vishakhapatnam-3; Dhule-4; Gangtok-5/ Location: Urban-1; Urban slum-2; Rural-3

Namaste. My name is ------------------------ and I am working with (NAME OF ORGANISATION). We are conducting a Household Survey on behalf of the World Health Organisation & Ministry of Health, GOI. The survey is about the health of women and men in this region and some of the factors which are known to affect peoples’ health. We will ask you about the health behaviors of the family members in your family including information on recent illnesses.

After collecting some basic information regarding the family we would then like to ask more detailed questions about health behaviors from a randomly selected member of the family.

We will not be collecting names and addresses so that the information cannot be traced back to you.

We would very much appreciate the participation of your household in this survey. The survey usually takes about 10 minutes to complete. Whatever information you provide will be kept strictly confidential. Since we will not be recording names and addresses none of the information can be traced back to you.

Participation in this survey is voluntary and you can choose not to answer any question or all of the questions. However, we hope that you will participate in this survey since your participation is important.

At this time, do you want to ask me anything about the survey? ANSWER ANY QUESTIONS AND ADDRESS RESPONDENT’S CONCERNS.

In case you need more information about the survey, you may contact these persons. GIVE CARD WITH CONTACT INFORMATION.

May I begin the interview now?

Signature of interviewer------------------------------------------- Date-----------------------

RESPONDENT AGREES TO BE INTERVIEWED ....1 RESPONDENT DOES NOT AGREE TO BE INTERVIEWED .......2 EN

BEGIN INTERVIEW

PLEASE ENSURE THAT YOU WRITE THE NUMBERS OR ‘X’ MARKS WITHIN THE BOXES PROVIDED.

Could you please give me some information about each of the members of this household

1. First, please list all the members who live in this household (no names required) and indicate their relationship to yourself.
   Relationship To Informant: 01 = Wife Or Husband; 02 = Son Or Daughter; 03 = Son-In-Law Or Daughter-In-Law; 04 = Grandchild; 05 = Parent; 06 = Parent-In-Law; 07 = Brother Or Sister; 08= Brother-In-Law Or Sister-In-Law; 09 = Niece/Nephew; 10= Other Relative; 11 = Adopted/Foster/Step-Child; 12 = Domestic Servant; 13 = Other Not Related; 98 = Don’t Know

2. Sex (M =1,F = 2)

3. Age [in years]

4. Education [Illiterate = 0; Primary = 0/ Secondary=10/ Higher secondary=12/ Technical=14/ Graduation=15/ PG=17/ Professional = 18/ Prof PG= 21/ Post doc=25]

5. In case there are children below the age of 18 years not attending school/college or members who stopped studying before 18y please indicate the Reason For Not Attending School till 18yars: 1 = too far away / no transport; 2 = further education not considered necessary; 03 = not interested in studies / repeated failures; 04= required for household / outside work; 05= costs too much; 06= no proper school ; 09=not safe to send girls; 10= got married


7. Occupation [1. Businessman/industrialist: 2. Professional: (e.g., engineer, lawyer, accountant, systems analyst, doctor) / 3. Technical support (e.g., lab technician, legal assistant, computer programmer) / 4. Sales: (e.g., sales representative, retail shopkeeper) / 5. Clerical and administrative support (e.g., secretary, billing clerk, office supervisor) / 6. Service occupation (e.g., security officer, food service worker, janitor) / 7. Precision production and crafts worker (e.g., mechanic, carpenter, machinist) / 8. Operator or skilled laborer (e.g., assembly line worker, truck driver, construction worker) / 9. Farm worker, manual unskilled laborer, housemaid, 10. Land-owner, land-lord / 11. Self-employed (entrepreneur) / 12. Homemaker / 13. Student/ 14. Unemployed but employed under Minimum wage guarantee scheme / 15. Unemployed

8. Can you please indicate the approximate monthly income (or 8a. income range) of all earning family members?

9. Have any of the family members experienced any recent health problems in the last 12 months? They could be due to...


11. Treatment for Chronic or long term illness (suffering >1years)
   None-0; [1] Brain problems, Paralyisis/stroke, epilepsy; Heart problems; Breathing problems; TB; Mental problems; Disability; Diabetes; Blood pressure; Hormone problems; Stomach problems; Repeated jaundice; Piles

12. Which members of the family use tobacco?

13. Which members of your family consume alcoholic drinks at least once in the last 12 months?

14. Can we first list their relationship to you

15. Sex

16. Age when they passed away

17. Whether there were any significant health problems which you think might be linked to their death or which they were suffering from at that time.

18. Acute/ sudden illness

19. Whether they were suffering from Chronic or long term illness (suffering >1year)

20. Did any of them use tobacco?

21. How frequently did they have alcoholic drinks?
Have there been any deaths in the family (parents, spouses, siblings, children) in the past 5 years? If so, could you please tell us the probable reason? Could you tell us about their use of tobacco and alcohol?

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<thead>
<tr>
<th>Relation</th>
<th>Sex</th>
<th>Age</th>
<th>Injuries</th>
<th>Acute Ill</th>
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22. What is the household type: for rural areas: self-employed in non-agriculture-1, agricultural labour-2, other labour-3, self-employed in agriculture-4, others-9; for urban areas: self-employed-1, regular wage/salary earning-2, casual labour-3, self-employed in agriculture-4, others-9


24. Type of structure: pucca-1, semi-pucca-2, serviceable katcha-3, unserviceable katcha-4, no structure-5

25. Area: Urban, Rural

27. Primary source of energy for cooking: coke, coal-01, firewood and chips-02, LPG-03, gobar gas-04, dung cake-05, charcoal-06, kerosene-07, electricity-08, others-95, no cooking arrangement-10

28. What is the main source of drinking water for members of your household?

29. Primary source of energy for lighting: kerosene-1, other oil-2, gas-3, candle-4, electricity-5, others-9, no lighting arrangement-6

30. Does this household have a BPL card? No-0; Yes-1

31. Is any member of this household covered by a health scheme or health insurance? No-0; Employees State Insurance Scheme (Esis)-1; Central Government Health Scheme (Cghs)-2; Community Health Insurance Programme-3; Other Health Insurance-4; Through Employer-5; Medical Reimbursement From Employer-6; Other Privately Purchased Commercial Health Insurance-7

32. Does your household have: [No-0; Yes-1]
- Electricity?
- A mattress?
- A pressure cooker?
- A chair?
- A cot or bed?
- A table?
- An electric fan?
- A radio or transistor?
- A colour television?
- A sewing machine?
- A mobile telephone?
- Any other type of telephone?
- A computer?
- A refrigerator?
- A watch or clock?
- A bicycle?
- A motorcycle or scooter?
- An animal-drawn cart?
- A car?
- A water pump?
- A threshing machine?
- A tractor?

33. How often do you yourself consume the following food items?
- Daily-3
- Weekly-2
- Occasionally-1
- Never-0
- a. Milk or curd?
- b. Pulses or beans?
- c. Dark green leafy vegetables?
- d. Fruits?
- e. Eggs?
- f. Fish?
- g. Chicken or meat?

*RESULT CODES:
1 COMPLETED ; 2 NO HOUSEHOLD MEMBER /COMPETENT RESPONDENT AT HOME ; 3 ENTIRE HOUSEHOLD ABSENT FOR EXTENDED PERIOD OF TIME ; 4 POSTPONED
5 REFUSED ; 6 DWELLING VACANT /DESTROYED/ NOT ELIGIBLE; 9 OTHER (SPECIFY)
TOTAL PERSONS TOTAL ELIGIBLE WOMEN WOMAN USER TOTAL ELIGIBLE MEN YOUNG MALE USER (<25years) OLDER MALE USER

NO. OF RESPONDENT TO INDIVIDUAL QUESTIONNAIRE
**Annexure3:**

**Individual Questionnaire**

**Greetings!** I have come on behalf of ______(an organization working in this area)_____, along with the WHO & Ministry of Health (NIMHANS) is carrying out a survey on certain health, social and economic issues of people in this area. I would like to ask you some questions about yourself and members of your family. This interview may take about 45 min.

The information you provide will be kept confidential and used only for research purposes. This survey will help us to suggest some interventions to bring about improvements in health planning. Your participation is voluntary. You will not directly benefit from this interview. If you are willing to participate kindly sign below.

I hereby give my consent to participate in the survey.

<table>
<thead>
<tr>
<th>Name of Interviewer: ___________________________</th>
</tr>
</thead>
</table>

**DETAILS OF THE INTERVIEW**

<table>
<thead>
<tr>
<th>Location:</th>
<th>Residence:</th>
<th>Work place:</th>
<th>Others:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Area Code:</th>
<th>Family code:</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>No. of members in Household:</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Address:</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Site ID</th>
<th>Household ID</th>
<th>Individual ID</th>
<th>Interviewer ID</th>
</tr>
</thead>
</table>

**A | Demographics**

<table>
<thead>
<tr>
<th>A1</th>
<th>Age [0-20] years</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>A2</th>
<th>Sex [Male=1, Female=2 / other=3]</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>A3</th>
<th>Education [Illiterate = 1, Primary = 2, Secondary = 3, Higher secondary = 4, Technical = 5, Graduation = 6, Professional = 7]</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>A4</th>
<th>Work status in last 6 months</th>
</tr>
</thead>
</table>

1. (1) Working; (2) Have a job, but not attending (extended illness, maternity leave, strike, seasonal work); (3) Unemployed - looking for work; (4) Unemployed - not looking for work; (5) Full-time housewife; (6) In school/collage; (7) Enrolled - not attending; (8) Retired; (9) Disabled, unable to work; (10) Other, specify ____________________

<table>
<thead>
<tr>
<th>A5</th>
<th>Personal Monthly Income: How much do you usually earn, per month (after income tax)? [Rs. 0 - 1500; 1. Rs. 1501 - 3750; 2. Rs. 3751 - 8000; 3. Rs. 8001 - 18000; 4. Rs. 18001 - 49999; 5. Rs. 50000 - 1,00,000]</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>A6</th>
<th>Including wages, salaries, self-employment, and any other source of income we just talked about, was the total combined family income during the last 12 months (NCAER Guidelines)? [Rs. 0; 1. Rs. 1500; 2. Rs. 1501 - 3750; 3. Rs. 3751 - 8000; 4. Rs. 8001 - 18000; 5. Rs. 18001 - 49999; 6. Rs. 50000 - 1,00,000]</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>A7</th>
<th>Marital status</th>
</tr>
</thead>
</table>


<table>
<thead>
<tr>
<th>A8</th>
<th>Children and Family members</th>
</tr>
</thead>
</table>

Adult – including children 10 years and over ___; Children under age of 18 years ___

<table>
<thead>
<tr>
<th>A9</th>
<th>Type of locality the family is residing</th>
</tr>
</thead>
</table>

1. Urban residential; 2. Urban slums; 3. Rural; 5. None of the family member is employed 0

<table>
<thead>
<tr>
<th>A10</th>
<th>Type of dwelling</th>
</tr>
</thead>
</table>

1. No place to live, pavement; 2. Rented jhuggi; 3. Own jhuggi; 4. Rented/Govt. house with 1 room; 5. Own house with 1-2 rooms; 6. Rented/Govt. house with 3-4 rooms; 7. Own house with 3-4 rooms; 8. Rented/Govt. house with 5 or more rooms; 9. Own house with 5 or more rooms

<table>
<thead>
<tr>
<th>A11</th>
<th>Occupation of Spouse</th>
</tr>
</thead>
</table>

AS ABOVE

<table>
<thead>
<tr>
<th>A12</th>
<th>Occupation (Children)</th>
</tr>
</thead>
</table>

Are these true responses

<table>
<thead>
<tr>
<th>A13</th>
<th>Education of children (in relation to head of the family)</th>
</tr>
</thead>
</table>

Note: Exclude under 5 children for this item. A child applicable here is one who is 5 yrs or above.

1. All children going/every gone to school/collage 3
2. >50% children ever gone/gone to school/collage 2
3. >50% children ever gone/every gone to school/collage 1
4. No child ever gone/every gone to school/collage 0

<table>
<thead>
<tr>
<th>A14</th>
<th>Tangible assets</th>
</tr>
</thead>
</table>

Family possessions (presence of each item given below will carry score of 1.)


Tel 8. Credit card; 9. Sanitary lat. 10. Any newspaper subscribed throughout the month Air-conditioner; Water Purifier; Personal Computer; Laptop computer; Cable TV; Water tap in the home

<table>
<thead>
<tr>
<th>A15</th>
<th>Possession of a vehicle or equivalent</th>
</tr>
</thead>
</table>

1. 2 or more cars/Tractors/Trucks 4
2. 1 Car /Tractor/Truck 3
3. 1 or more scooter(s)/Bullock cart(s) 2
4. 1 or more cycles (not baby cycle) 1
5. None of the above

<table>
<thead>
<tr>
<th>A16</th>
<th>What religion do you practice?</th>
</tr>
</thead>
</table>

None; Hinduism; Islam; Christianity; Sikhism; Judaism; Buddhism; Zoroastrianism; others
### HEALTH SCREENER

As part of the study, we would like to know about your health and wellbeing in the last 12 months....

**B1** In general, how would you rate your health in the last 12 months?  
1. Very good  
2. Good  
3. Moderate  
4. Bad  
5. Very Bad  

**B2** Overall in the last 30 days, how much difficulty did you have with work or household activities?  
1. None  
2. Mild  
3. Moderate  
4. Severe  
5. Extreme  

**B3** What do you feel about your family’s state of health (overall)?  
1. Better than average  
2. Average  
3. Worse than average  

**B4** Do you have any longstanding (more than 2 years) illness or disability which requires medical attention or has troubled you over a period of time?

<table>
<thead>
<tr>
<th>In the past 12 months... have you ever required to see a doctor/ health worker for... or been treated for?</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>X if yes</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**B5** Have you ever had:  
1. High blood pressure (hypertension)?  
2. Raised blood sugar or diabetes?  
3. Stomach pain, gastritis or stomach ulcer?  
4. Jaundice (yellow eyes and skin) or liver problems / hepatitis?  
5. Fits or convulsion (epilepsy)?  
6. Small accidents or injuries not requiring hospitalisation?  
7. Sudden injury - road traffic accident or injury due to fall, assault) requiring hospital treatment?  
8. Skin rash or itching and scaly lesions over skin?  
9. Tuberculosis - bad or persistent cough, evening fever with coughing up blood or sputum?  
10. Arthritis - painful swollen joints - constant stiffness in muscles and joints?  
11. Sleep problems?  
12. Difficulties breathing, Asthma?  
13. Cancer?  
14. Other 1?  
15. Other 2?

**B22** In the past one month how frequently have you...  

<table>
<thead>
<tr>
<th>Activity</th>
<th>Daily</th>
<th>Weekly</th>
<th>Occasionally</th>
<th>Never</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lost sleep over worry?</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Felt constantly under strain?</td>
<td></td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Been unable to enjoy your normal day to day activities?</td>
<td></td>
<td></td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Been feeling unhappy or depressed?</td>
<td></td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Been feeling reasonably happy, all things considered?</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Been unable to enjoy your normal day to day activities?</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Felt constantly under strain?</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**B28** How frequently do you consume:  

<table>
<thead>
<tr>
<th>Food</th>
<th>Daily</th>
<th>Weekly</th>
<th>Occasionally</th>
<th>Never</th>
</tr>
</thead>
<tbody>
<tr>
<td>Milk or curd</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pulsar / beans (dal,beans, rajma, etc.)</td>
<td></td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dark green leafy vegetables</td>
<td></td>
<td></td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Fruits</td>
<td></td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Eggs</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fish</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chicken or meat?</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**B25** Does your work involve vigorous-intensity activity that causes large increases in breathing or heart rate like (carrying or lifting heavy loads, digging or construction work) for at least 10 minutes continuously?

<table>
<thead>
<tr>
<th>How frequently in the last 12 months have you had the opportunity to perform these activities</th>
<th>Daily</th>
<th>Weekly</th>
<th>Occasionally</th>
<th>Never</th>
</tr>
</thead>
<tbody>
<tr>
<td>Visiting friends/ relatives and entertaining</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Going out on trips / holidays/picnics</td>
<td></td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hobbies, sport and games</td>
<td></td>
<td></td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Watching Television, listening to radio/ music</td>
<td></td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Going out for movies with friends/family</td>
<td></td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Going out to a restaurant-eating out with family / friends</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Political, social, religious or club activities</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jobs in the home, gardening or looking after plants or animals</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### HOUSEHOLD EXPENDITURE AND HEALTH SPENDING

I would like to ask you some questions about how much your household spends on necessary expenses, health services and other things.

**C1** What is the principal source of income for the household?  
1. Employment=08  
2. Professional/Educational=09  
3. Business=10  
4. Others (specify)=11  
5. Others (specify)=11
In the last 12 months, how many times has a family member been admitted to hospital or an emergency department? (GP/Specialist, medical/health centre)

- 0. None
- 1. Less than Rs. 100
- 2. 100
- 3. 1001
- 4. 5000
- 5. 50001
- 6. 50001
- 7. >1 lakh

What was the occupation of the household head's father/husband (for most of his life)?

- 0. Allied/Agri
- 1. AgricWage
- 2. Artisan/Indep
- 3. Petty shop
- 4. Organized trade
- 5. Salaried
- 6. Self-emp
- 7. Retired
- 8. None
- 9. Occupational
- 10. Others

Compared to five years back, how would you rate your current standard of living?  Much worse

- 0. None
- 1. Less than a quarter of my monthly income
- 2. Between a quarter and a half of my monthly income
- 3. More than half of my monthly income

What were your total expenses for your treatment? (GP/Specialist, medical/health centre)

- 0. Never
- 1. Once or twice
- 2. Three to five
- 3. Six or more

In the last 12 months: How frequently have you spent large amounts (greater than one month's salary) on non-routine expenses?

- Leisure travel
- Social ceremonios: pujas
- Marriages
- Buying assets (refrigerator, television, music system, car, etc)
- Buying property

In the last 12 months, which of the following financial sources did your household use to pay for such expenditures?

- 0. Current income of any household members
- 1. Savings (e.g. bank account)
- 2. Payment or reimbursement from a health insurance plan
- 3. Credit card
- 4. Sold items (e.g. furniture, animals, jewellery, furniture)
- 5. Family members or friends from outside the household
- 6. Borrowed from someone other than a friend or family

Compared to five years back, how would you rate your current income?  Much worse

- 0. None
- 1. Less than a quarter of my monthly income
- 2. Between a quarter and a half of my monthly income
- 3. More than half of my monthly income

In the last 12 months, how many times have you received any OTHER medical treatment? (GP/Specialist, medical/health centre)

- 0. None
- 1. Less than Rs. 100
- 2. 100
- 3. 1001
- 4. 5000
- 5. 50001
- 6. 50001
- 7. >1 lakh

How many times in the last 12 months have you been admitted to hospital or an emergency department?

- 0. Never
- 1. Once or twice
- 2. Three to five
- 3. Six or more

What were your total expenses for your treatment?

- 0. Never
- 1. Once or twice
- 2. Three to five
- 3. Six or more

Did you borrow or take any financial loan in the last 5 years? (e.g. bank account; Payment or reimbursement from a health insurance plan; Credit card; Sold items (e.g. furniture, animals, jewellery, furniture); Family members or friends from outside the household; Borrowed from someone other than a friend or family)

- 0. None
- 1. 1
- 2. 2
- 3. 3
- 4. 4
- 5. 5
- 6. 6
- 7. 7
- 8. 8
- 9. 9
- 10. Others

What were your total expenses for your treatment?

- 0. Never
- 1. Once or twice
- 2. Three to five
- 3. Six or more

In the last 28 days, how many days did you miss an entire work day because of problems with your physical/mental health?

- 0. None
- 1. 1-2 days
- 2. 3 days to one week
- 3. 2 weeks to 1 month
- 4. More than a month

In the past 28 days, how many days did you miss an entire work day because of problems with your physical/mental health?

- 0. None
- 1. 1-2 days
- 2. 3 days to one week
- 3. 2 weeks to 1 month
- 4. More than a month

In the last 12 months, which of the following financial sources did your household use to pay for any health expenditures?

- 0. Current income of any household members
- 1. Savings (e.g. bank account)
- 2. Payment or reimbursement from a health insurance plan
- 3. Credit card
- 4. Sold items (e.g. furniture, animals, jewellery, furniture)
- 5. Family members or friends from outside the household
- 6. Borrowed from someone other than a friend or family

About how much of your monthly income do you use to pay for food and non-food expenses (clothes, utensils, rent, electricity, etc.)?

- a. Do not contribute for these items.
- b. Less than a quarter of my monthly income.
- c. Between a quarter and a half of my monthly income.
- d. More than half of my monthly income.

About how much of your monthly income do you use to pay for installment debt (auto loans, credit cards, etc., but not mortgages)?

- a. I have no installment debt.
- b. Less than a quarter of my monthly income.
- c. Between a quarter and a half of my monthly income.
- d. More than half of my monthly income.

In the past 28 days, how many days did you spend on your treatment in the past month?

- 0. Never
- 1. Once or twice
- 2. Three to five
- 3. Six or more
### Prevalence & Patterns of use

<table>
<thead>
<tr>
<th>D</th>
<th>TOBACCO</th>
</tr>
</thead>
<tbody>
<tr>
<td>D1</td>
<td>Does someone in your household or in your workplace smoke in closed areas (in the building) when you are present? 0. No; 1. Yes</td>
</tr>
<tr>
<td>D2</td>
<td>Do you currently smoke tobacco (cigarette, bidi, etc) or use smokeless tobacco products (khasi, flav, zarda)? 0. No; 1. Smoke; 2. Smokeless; 3. Both</td>
</tr>
<tr>
<td>D2 + NO, SKIP TO E1</td>
<td></td>
</tr>
<tr>
<td>D3</td>
<td>At what age did you start regular use (at least once a month)?</td>
</tr>
<tr>
<td></td>
<td>1. &lt;45 years; 2. 35 - 45 years; 3. 26-34 years; 4. 21-25 years; 5. 16-20 years; 6. &lt;15 years</td>
</tr>
<tr>
<td>D4</td>
<td>In the past 4 weeks how much have you spent on buying tobacco products (bidi, cigarette, zarda, khasi, flav etc)?</td>
</tr>
<tr>
<td></td>
<td>1. &gt;45 years; 2. 35-40 years; 3. 26-30 years; 4. 21-25 years; 5. 16-20 years; 6. &lt;15 years</td>
</tr>
<tr>
<td>D5</td>
<td>Do you find it difficult to refrain from smoking in places where it is forbidden, e.g., in places of worship, the library, the cinema, etc?</td>
</tr>
<tr>
<td></td>
<td>0. No; 1. Yes</td>
</tr>
<tr>
<td>D6</td>
<td>Which cigarette (or smt) would you hate most to give up?</td>
</tr>
<tr>
<td></td>
<td>0. No; 1. The first one in the morning</td>
</tr>
<tr>
<td>D7</td>
<td>How many cigarettes do you smoke per day?</td>
</tr>
<tr>
<td></td>
<td>0. 10 or fewer; 1. 11</td>
</tr>
<tr>
<td>D8</td>
<td>Do you smoke more often during the first hours after waking than during the rest of the day? 0. No; 1. Yes</td>
</tr>
<tr>
<td>D9</td>
<td>Do you smoke even if you are so ill that you are in bed most of the day? 0. No; 1. Yes</td>
</tr>
</tbody>
</table>

### ALCOHOLIC BEVERAGES

<table>
<thead>
<tr>
<th>E</th>
<th>How often do you have a drink containing alcohol in the past year?</th>
</tr>
</thead>
<tbody>
<tr>
<td>E1</td>
<td>(0) Never; (1) Monthly or less; (2) 2 to 4 times a month; (3) 2 to 3 times a week; (4) 4 or more times a week</td>
</tr>
<tr>
<td>E2</td>
<td>If E1=0; Did you EVER IN YOUR LIFE have a drink of any beverage containing alcohol? Yes (1); No (0)</td>
</tr>
<tr>
<td>E3</td>
<td>What is the reason you do not drink (now)? (CHECK ALL THAT APPLY)</td>
</tr>
<tr>
<td></td>
<td>3.1. No occasion came up where I wanted to drink</td>
</tr>
<tr>
<td></td>
<td>3.2. My responsibilities require me to be sober</td>
</tr>
<tr>
<td></td>
<td>3.3. My religion forbids it</td>
</tr>
<tr>
<td></td>
<td>3.4. It does not interest me</td>
</tr>
<tr>
<td></td>
<td>3.5. Brought up not to drink</td>
</tr>
<tr>
<td></td>
<td>3.6. My health is bad/en medication</td>
</tr>
<tr>
<td></td>
<td>3.7. Too expensive</td>
</tr>
<tr>
<td></td>
<td>3.8. It would have a bad effect on my activities</td>
</tr>
<tr>
<td></td>
<td>3.9. I am afraid I would have problems with alcohol/become alcoholic</td>
</tr>
<tr>
<td></td>
<td>3.10. I have no reason</td>
</tr>
<tr>
<td></td>
<td>3.11. I am pregnant/trying to get pregnant</td>
</tr>
<tr>
<td></td>
<td>Other (specify____________________________)</td>
</tr>
<tr>
<td>E4</td>
<td>What is your beverage of first-preference (have most frequently)</td>
</tr>
<tr>
<td></td>
<td>IMFL – whisky, rum, vodka, gin; beer - normal[2]; beer - strong[3]; wine [4]; country liquor – spirits (legal)[5]; illicit liquor spirits[6]; locally made beer/wine[7].</td>
</tr>
<tr>
<td>E5</td>
<td>How often do you have first-preference drink in the past year?</td>
</tr>
<tr>
<td></td>
<td>(0) Never; (1) Monthly or less; (2) 2 to 4 times a month; (3) 2 to 3 times a week; (4) 4 or more times a week</td>
</tr>
<tr>
<td>E6</td>
<td>How many drinks** of first-preference drink do you have on a typical day when you are drinking?</td>
</tr>
<tr>
<td></td>
<td>(0) 1 or 2; (1) 3 or 4; (2) 5 or 6; (3) 7, 8, or 9; (4) 10 or more</td>
</tr>
<tr>
<td>E7</td>
<td>How much does one drink of first-preference drink cost? Rs.</td>
</tr>
<tr>
<td>E8</td>
<td>What is your beverage of second-preference</td>
</tr>
<tr>
<td></td>
<td>IMFL – whisky, rum, vodka, gin; beer - normal[2]; beer - strong[3]; wine [4]; country liquor – spirits (legal)[5]; illicit liquor spirits[6]; locally made beer/wine[7].</td>
</tr>
<tr>
<td>E9</td>
<td>How often do you have second-preference drink in the past year?</td>
</tr>
<tr>
<td></td>
<td>(0) Never; (1) Monthly or less; (2) 2 to 4 times a month; (3) 2 to 3 times a week; (4) 4 or more times a week</td>
</tr>
<tr>
<td>E10</td>
<td>How many drinks of second-preference drink do you have on a typical day when you are drinking?</td>
</tr>
<tr>
<td></td>
<td>(0) 1 or 2; (1) 3 or 4; (2) 5 or 6; (3) 7, 8, or 9; (4) 10 or more</td>
</tr>
<tr>
<td>E11</td>
<td>How much does one drink of second-preference drink cost? Rs.</td>
</tr>
<tr>
<td>E12</td>
<td>2c. How often do you have locally made drinks or traditionally brewed drinks (buddh/ chhang/ rakhi/ cholai etc.) in the past year?</td>
</tr>
<tr>
<td></td>
<td>(0) Never; (1) Monthly or less; (2) 2 to 4 times a month; (3) 2 to 3 times a week; (4) 4 or more times a week</td>
</tr>
<tr>
<td>E13</td>
<td>Name the drink you have</td>
</tr>
<tr>
<td></td>
<td>A) ____________________________________________________________</td>
</tr>
<tr>
<td></td>
<td>B) ____________________________________________________________</td>
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<tr>
<td>E14</td>
<td>How much does this quantity cost? A) Rs.</td>
</tr>
<tr>
<td></td>
<td>B) Rs.</td>
</tr>
</tbody>
</table>
**Alcohol & Harm**

**E15** How many drinks of such traditional drinks do you have on a typical day when you are drinking?

(0) 1 or 2; (1) 3 or 4; (2) 5 or 6; (3) 7, 8, or 9; (4) 10 or more

**E11** How many drinks containing alcohol do you have on a typical day when you are drinking?

(0) 1 or 2; (1) 3 or 4; (2) 5 or 6; (3) 7, 8, or 9; (4) 10 or more

**E12** 3. How often do you have six or more drinks on one occasion?

(0) Never; (1) Less than monthly; (2) Monthly; (3) Weekly; (4) Daily or almost daily

**E13** At what age did you start regular use of alcohol—i.e. at least once a month?

>45 years (1); 35-44 years (2); 26-34 years (3); 21-25 years (4); 16-20 years (5); <15 years (6)

**E14** In the last 4 weeks how much would you have spent on buying alcoholic drinks? Rs. **One drink = 30 ml. spirits i.e. whisky/brandy/vodka/rum (1 quarter/ nip = 6 drinks; ½ bottle = 12 drinks; full bottle = 24) = ½ bottle plain beer = 1/3 bottle strong beer =

**FAMILIAL AND OTHER DRINKING CONTEXTS**

**DRINKING CONTEXTS**

Thinking back over the last 12 months, about how often did you drink in the following circumstances? Think of all the times that apply in each situation. e.g. having a drink with a meal in your own home should be included under both F1 and F3 Mark all that APPLY

<table>
<thead>
<tr>
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</thead>
<tbody>
<tr>
<td>F1</td>
<td>along with your meal- not snacks</td>
<td></td>
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<tr>
<td>F2</td>
<td>at a party or celebration</td>
<td></td>
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<tr>
<td>F3</td>
<td>in your own home</td>
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<tr>
<td>F4</td>
<td>at a friend’s home</td>
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<tr>
<td>F5</td>
<td>at your workplace</td>
<td></td>
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<tr>
<td>F6</td>
<td>in a bar/pub/disco/</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>F7</td>
<td>in a restaurant/club</td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>F8</td>
<td>in the street</td>
<td></td>
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<tr>
<td>F9</td>
<td>in a tody shop</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>F10</td>
<td>In a local (illicit) liquor shop</td>
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<td></td>
<td></td>
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<tr>
<td>F11</td>
<td>Others</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>F12</td>
<td>Weekends (Friday-Saturday-Sunday) evenings</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>F13</td>
<td>Weekdays evenings</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>F14</td>
<td>Weekend daytime</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>F15</td>
<td>Weekdays daytime</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>F16</td>
<td>Prior to having sex</td>
<td></td>
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</tbody>
</table>

**How often in the last 12 months have you had a drink when you were with the following persons?** Think of all the times that apply for each person. For example, having a drink with your spouse or partner and friends should be included under both “(F9) with your spouse or partner,” and “(F12) with friends.”

<table>
<thead>
<tr>
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</thead>
<tbody>
<tr>
<td>F17</td>
<td>Spouse—whether/ not others present?</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>F18</td>
<td>Male family member [brother/father]?</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>F19</td>
<td>Female family member</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>F20</td>
<td>people you work with?</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>F21</td>
<td>friends?</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>F22</td>
<td>no one happened to be with you?</td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

**DRINKING CONSEQUENCES**

Next are some questions about drinking-related experiences many people have during their lifetime.

<table>
<thead>
<tr>
<th>G</th>
<th>0. No</th>
<th>1. Yes</th>
<th>99. Don’t Know</th>
</tr>
</thead>
<tbody>
<tr>
<td>G1</td>
<td>on your work, studies or employment opportunities?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>G2</td>
<td>on your homework or chores around the house?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>G3</td>
<td>on your marriage/intimate relationships?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>G4</td>
<td>on your relationships with other family members, including your children?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>G5</td>
<td>on your friendships or social life?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>G6</td>
<td>on your physical health?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>G7</td>
<td>on your finances?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>G8</td>
<td>In the last 12 months, have you had any of the following experiences?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>G9</td>
<td>people annoyed you by criticizing your drinking?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>G10</td>
<td>got into a physical fight while drinking?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>G11</td>
<td>had an illness connected with your drinking keeping you from work/ regular activities?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>G12</td>
<td>spouse or someone you lived with threatened to leave or actually left because of your drinking?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>G13</td>
<td>lost a friendship because of your drinking?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>G14</td>
<td>lost a job, or nearly lost one, because of your drinking?</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td>G15</td>
<td>drunk enough to feel effects of the alcohol—e.g., speech slurred/ had trouble walking steadily?</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>G16</td>
<td>had a headache/or felt nauseous as result of drinking?</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>G17</td>
<td>taken a drink to get over bad after-effects of drinking?</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>G18</td>
<td>felt sick or found yourself shaking when you cut down or stopped drinking?</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### H1: HARMS TO OTHERS (FOR ALL)

Now we are interested in the people you have been in contact with over the last 12 months and their drinking. We do not need to know names, just their relationships to you.

**H1** Thinking about the last 12 months, can you think of anyone (e.g., members of your family, friends, coworkers or others) you would consider to be a fairly heavy drinker, or someone who drinks a lot sometimes?

- No: (GO TO ---) (1) Yes

**H2** What is their relationship to you? (Tick more than one if relevant)


---

#### How many times in the last 12 months, because of the drinking of any of those people

<table>
<thead>
<tr>
<th>Never</th>
<th>Occasional</th>
<th>1-4 times</th>
<th>&gt;5 times</th>
<th>Very frequent</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

---

**H3** Did you have a serious argument?

- No: (GO TO ---) (1) Yes

**H4** Were you threatened with violence/ weapon?

- No: (GO TO ---) (1) Yes

**H5** Did you feel you were emotionally hurt or neglected?

- No: (GO TO ---) (1) Yes

**H6** Did you feel physically hurt?

- No: (GO TO ---) (1) Yes

**H7** Did you stop seeing anyone of these people?

- No: (GO TO ---) (1) Yes

**H8** Did you have an accident after drinking?

- No: (GO TO ---) (1) Yes

**H9** Have you had any experiences of drinking resulting in forceful sex?

- No: (GO TO ---) (1) Yes

**H10** have you…?

- No: (GO TO ---) (1) Yes

**H11** Did you have to cover for them because of their drinking?

- No: (GO TO ---) (1) Yes

**H12** Did you have to clean up after a family member or friend?

- No: (GO TO ---) (1) Yes

**H13** Did you have to take on extra responsibilities?

- No: (GO TO ---) (1) Yes

**H14** Did you have to leave home to stay somewhere else?

- No: (GO TO ---) (1) Yes

**H15** Did you have to do things you were not normally expected to do because of their drinking?

- No: (GO TO ---) (1) Yes

**H16** Did you have to do things you were not normally expected to do because of their drinking?

- No: (GO TO ---) (1) Yes

**H17** Did you have to do things you were not normally expected to do because of their drinking?

- No: (GO TO ---) (1) Yes

**H18** Did you have to do things you were not normally expected to do because of their drinking?

- No: (GO TO ---) (1) Yes

**H19** Did you have to do things you were not normally expected to do because of their drinking?

- No: (GO TO ---) (1) Yes

**H20** Did you have to do things you were not normally expected to do because of their drinking?

- No: (GO TO ---) (1) Yes

**H21** Did you have to do things you were not normally expected to do because of their drinking?

- No: (GO TO ---) (1) Yes

**H22** Did you have to do things you were not normally expected to do because of their drinking?

- No: (GO TO ---) (1) Yes

**H23** Did you have to do things you were not normally expected to do because of their drinking?

- No: (GO TO ---) (1) Yes

**H24** Did you have to do things you were not normally expected to do because of their drinking?

- No: (GO TO ---) (1) Yes

**H25** Did you have to do things you were not normally expected to do because of their drinking?

- No: (GO TO ---) (1) Yes

**H26** Did you have to do things you were not normally expected to do because of their drinking?

- No: (GO TO ---) (1) Yes

**H27** Did you have to do things you were not normally expected to do because of their drinking?

- No: (GO TO ---) (1) Yes

**H28** Did you have to do things you were not normally expected to do because of their drinking?

- No: (GO TO ---) (1) Yes

**H29** Did you have to do things you were not normally expected to do because of their drinking?

- No: (GO TO ---) (1) Yes

**H30** Did you have to do things you were not normally expected to do because of their drinking?

- No: (GO TO ---) (1) Yes

**H31** Did you have to do things you were not normally expected to do because of their drinking?

- No: (GO TO ---) (1) Yes
Alcohol & Harm

H32 Has your productivity at work been reduced because of a colleague’s drinking?

H33 Has your ability to do your job been negatively affected?

H34 Were you involved in an accident or a near-accident at work?

H35 Have you had to work extra hours?

HARM TO OTHERS: ALCOHOL-RELATED HARM IN THE COMMUNITY

We would now like to ask you about STRANGERS or PEOPLE YOU DON’T KNOW VERY WELL. *(ALL)*

In the last 12 months, how many times, because of some strangers’ drinking or drunken behavior, have you …

<table>
<thead>
<tr>
<th>Question</th>
<th>Never(0)</th>
<th>Occasionally(1)</th>
<th>Frequently(2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>H36 Been disturbed or kept awake at night?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>H37 Experienced trouble or noise because of drinkers at a bar/drinking place?</td>
<td></td>
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<tr>
<td>H38 Been verbally abused or threatened?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>H39 Been physically abused or hurt?</td>
<td></td>
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</tr>
<tr>
<td>H40 Been involved in a serious argument</td>
<td></td>
<td></td>
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<tr>
<td>H41 Been involved in a traffic accident because of someone else’s drinking?</td>
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<tr>
<td>H42 Felt unsafe while using public transport or in any public place?</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>H43 Gone out of your way to avoid drunk people or places where drinkers hang out?</td>
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<tr>
<td>H44 Been annoyed by people vomiting, urinating or littering after drinking?</td>
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<tr>
<td>H45 Had someone affected by alcohol paid you unwanted sexual attention or behaved in a sexually inappropriate way?</td>
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</tr>
<tr>
<td>H46 Been forced or pressured into sexual activity because of someone else’s drinking?</td>
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</tbody>
</table>

HARM TO OTHERS: SERVICE USE

Now thinking about services you may have used in the last 12 months because of other people’s drinking…

<table>
<thead>
<tr>
<th>Question</th>
<th>Never(0)</th>
<th>Occasionally(1)</th>
<th>Frequently(1)</th>
</tr>
</thead>
<tbody>
<tr>
<td>H48 Called the police (because of other people’s drinking)?</td>
<td></td>
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<tr>
<td>H49 Been admitted to hospital or an emergency department?</td>
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<tr>
<td>H50 Received any OTHER medical treatment?</td>
<td></td>
<td></td>
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<tr>
<td>H51 Received counselling or professional advice, including calling a helpline or going to a self-help group?</td>
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</tr>
<tr>
<td>H52 Have you had to take off work in the last 12 months due to other people’s drinking?</td>
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</tbody>
</table>

Thank you for your co-operation. Is it OK if another colleague comes and interviews you again? Greetings! I have come on behalf of [name of organization] along with the WHO & Ministry of Health (NIMHANS) is carrying out a survey on certain health, social and economic issues of people in this area. I would like to ask you some questions about yourself and members of your family. This interview may take about 45 min. The information you provide will be kept confidential and used only for research purposes. This survey would help us to suggest some interventions to bring about improvements in health planning. Your participation is voluntary. You will not directly benefit from this interview. If you are willing to participate kindly sign below

I hereby give my consent to participate in the survey.

Name and signature of the respondent

Name of Interviewer: _____________________________

DETAILS OF THE INTERVIEW

Location: Residence: 1 Work place: 2 Others: 3

Language: __________

Area Code: ________ Family code

No. of members in Household: _____

Address: _____
### Annexure 4:

**Focus Group Discussion on the Impact of Alcohol Use in the Community**

A focus group is an interactive, small group discussion conducted in a controlled environment, where a selected group of people discuss a specific topic or topics. The focus groups are meant to provide qualitative data to explore factors related to alcohol misuse and its impact in more depth. Participants should include active members of the population being examined or persons involved in the subject being explored. The conversation is led by a moderator whose role is to foster interaction, keep the group on task, and encourage all to participate. A focus group discussion should be informal. Participants are encouraged to talk to one another about their experiences, preferences, needs, observations or perceptions. The moderator should follow up on participants’ comments to obtain further details and introduce new topics to the discussion. The moderator has the job of redirecting the discussion when it goes off the agenda but also keeping an ear out for “outside” comments that may lead to more insight into the issue being addressed. It is important to have at least two moderators for each focus group, one to introduce the themes and the other to record observations including areas where perceptions differ, to record consensus and dissent and contribution from different members. It is ideal but not essential that the focus group proceedings are audio recorded and that participants are informed of this in advance. Please record the consent of the participants for the focus group.

With respect to the probes below, only the major theme should be first introduced. The remaining are probes that the moderator can use in case they do not automatically get covered.

**Recommended that there be at least two or more FGDs** –

- **A1** People who may be have a special knowledge about the medical, social and economic impact/ costs of alcohol misuse in the community: (A1) Health personnel- specialist doctors, general physicians/ PHC doctors and nurses, medical officers in industrial units, medical officers in emergency rooms; (A2) Development NGOs, Micro-finance organization personnel, MGNREGA officials, Community leaders (A3) Police, (A4) Excise personnel, (A5) Workplace experts; Large medium and small industry owners or personnel managers

- **A2** People who will have special knowledge regarding the patterns of use of alcohol in the community e.g. Bar owners, legal

---

#### Key Information Required – Recommended that all these stem questions (in bold) be put to all the groups and the questions in italics be used as further probes

<table>
<thead>
<tr>
<th><strong>KEY AREA 1</strong> – What are the alcoholic beverages (drinks) Available in your area?</th>
<th><strong>Primary Informants</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Q1.</strong> What are the drinks containing alcohol available in your area? (What do people in your area normally drink?) Can you give us some information about the Average costs? What are the legal drinks available and what are the most popular? Spirits like whiskey, rum, brandy, gin, vodka; beer-normal and strong beer; wine; country liquor or any other like feni etc.</td>
<td>Excise officials, lay people, bar owners - especially All others will also have knowledge of drinking patterns</td>
</tr>
<tr>
<td><strong>Q2.</strong> How do people access them? (From where do they get their drinks). What are these places like? What kind of outlets are available for people to buy and take home/ sit and drink etc.? If someone wanted to have a drink how can they get them?</td>
<td></td>
</tr>
<tr>
<td><strong>Q3.</strong> Are there locally made drinks that people use? How are they made? Is their effect different from factory made drinks? Do people have access to traditional drinks? What about home brewed drinks like toddy, neera, rice wine or beer, chhaang etc.? What about distilled drinks like raksi, chorai, arrack etc.? Can you list them? What are they- how are they made and how are they distributed/sold, who drinks what? Are there any problems regarding their quality or do they cause less or more health problems than factory made drinks?</td>
<td></td>
</tr>
<tr>
<td><strong>Q4.</strong> Are all traditional drinks also illegal in your state? What are the illicit drinks? - how are they made and how are they distributed/sold, who drinks what? Are there any problems regarding their quality or do they cause less or more health problems than factory made drinks?</td>
<td></td>
</tr>
<tr>
<td><strong>Q4a.</strong> Are there laws regarding drinking in your place? What is the legal age for drinking? Is it generally enforced? Are there any curbs on drinking enforced in your state – a. drinking and driving, b. dry days, c. opening-closing hours, d. no shops near educational or medical institutions or highways etc. e. other laws to reduce drinking f. what about alcohol advertising – surrogate advertising</td>
<td></td>
</tr>
<tr>
<td><strong>Q5.</strong> What has been the change in availability of drink compared to 5 years back? Do you think the availability of alcohol is increasing or decreasing in your area? What evidence do you have for saying so?</td>
<td></td>
</tr>
<tr>
<td><strong>Q6.</strong> Do you think it is easier or more difficult to get a drink compared to 5 years back? What has been the change in the cost of a bottle of spirit compared to the cost of rice 5 years back? Do you think the cost of a bottle of spirits has increased proportionately, more or less?</td>
<td></td>
</tr>
</tbody>
</table>

#### KEY AREA 2 – Attitudes and Public Discourse about Drinking alcohol

<table>
<thead>
<tr>
<th><strong>Q1.</strong> What are the most common reasons why people drink?</th>
<th><strong>Journalist, society leaders</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Q2.</strong> Are there different patterns of drinking in your society? Who do you think drinks alcohol – is it confined to some groups or widespread across all social and economic groups? Do you think that there has been a change in the type of people who drink today compared to 5 years back? What about drinking in women and young people?</td>
<td>Men and women may have different contributions</td>
</tr>
<tr>
<td><strong>Q3.</strong> What is your opinion about drinking? Is all drinking a problem in your milieu (Is any drinking a problem or not)? Do you discern different patterns of drinking? What is an appropriate amount to drink amongst the people you know? Is all drinking a problem in your milieu (Is any drinking a problem or not)?</td>
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<tr>
<td><strong>Q4.</strong> What is your opinion about young peoples drinking? At what age is it appropriate for young people to start drinking? What is the legal age for drinking in your state? What additional difficulties may young drinkers have or cause?</td>
<td></td>
</tr>
<tr>
<td><strong>Q5.</strong> What is your opinion about women’s drinking?</td>
<td></td>
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<tr>
<td>Q6.</td>
<td>Is it appropriate for women to drink in your social circle? Is your area where the women who drink, if at all?</td>
</tr>
<tr>
<td>Q6.</td>
<td>What is the public impact of people’s drinking? How often does drinking result in problems and what kind of problems? How frequently do you think people who are drinking, get drunk and lose control/get violent/cause a nuisance to others?</td>
</tr>
<tr>
<td>Q6.</td>
<td>Are there ways in which drinking gets promoted in your society? Alcohol advertising including surrogate advertising: Alcohol and sponsorship? What about alcohol companies and sports sponsorship?</td>
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<tr>
<td>Q7.</td>
<td>What are the things that people do when they are drunk? Alcohol and sexuality; alcohol – commercial sex; alcohol and violence; alcohol and violence in the family? Public nuisance?</td>
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<tr>
<td><strong>KEY AREA 3 – Impact on Health</strong></td>
<td></td>
</tr>
<tr>
<td>Q1.</td>
<td>What are the important alcohol related problems you see in your practice? Alcohol use and injuries? Alcohol use and medical problems? Alcohol use in people with other medical problems or people using medicines which react adversely with alcohol? Any others?</td>
</tr>
<tr>
<td>Q2.</td>
<td>How frequently (say out of 100 patients) do you get a client with alcohol related problems? Can you do a listing of the conditions you commonly encounter? a) directly caused by excessive alcohol intake e.g. gastritis, jaundice, alcohol dependence etc.; b) diseases complicated by alcohol use – e.g. diabetes, depression, hypertension, infections – TB etc.; c) alcohol may interact with medication; d) intoxication leading to injuries to self/ others – RTA, accident, suicide, burns, poisoning or amputations due to alcohol intoxication – disorientation – violence, high risk sexual behavior – STDs, sexual assault &amp; rape, unplanned pregnancies e) illicit alcohol problems – how common, what presentation, how do you manage methanol poisoning if you encounter such patients?</td>
</tr>
<tr>
<td>Q3.</td>
<td>What would you normally do when you come across a patient with alcohol related problems? Would you treat the pt. yourself or would you refer? If you have to refer whom would you refer to?</td>
</tr>
<tr>
<td>Q4.</td>
<td>What is your opinion on alcohol use in moderation (e.g. public discourse on alcohol and heart, alcohol and pleasure, alcohol and greater social mixing)?</td>
</tr>
<tr>
<td>Q5.</td>
<td>Are women and children that you see in your practice affected in any way by drinking that you see in society?</td>
</tr>
<tr>
<td>Q6.</td>
<td>Do you think alcohol misuse in the community has any effect on the effective rollout of the social upliftment or community development programmes? If so, in what way? And to what extent? Do you think that social development programmes or microfinance schemes are affected in any way? Some people say that a large part of welfare payments like MGNREGA etc. are often used to pay for alcohol. What is your experience? Do you think that alcohol misuse in the communities you work in have any effect on the effective working of your programmes?</td>
</tr>
<tr>
<td>Q6.</td>
<td>Are you aware of help/supports available to people who have problems with alcohol misuse? What would you recommend? What services would you recommend?</td>
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<tr>
<td>Q7.</td>
<td>What are the barriers to getting help? Is there a stigma in seeking help? Describe how this works. What would make it less of a barrier?</td>
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<tr>
<td><strong>KEY AREA 4 – Impact on Economy</strong></td>
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<tr>
<td>Q1.</td>
<td>Is there any impact from the use of alcohol in the workplace or to industry? Where do you face problems related to alcohol misuse in the area of your workplace – absences &amp; lost man days, more sick-leave, accidents, delays etc.? Personal and hearsay evidence.</td>
</tr>
<tr>
<td>Q2.</td>
<td>Can you put a figure on the proportion of losses at the workplace due to alcohol? How much of a problem do you think it is in terms of industrial losses? Can you quantify losses due to workers alcohol misuse? Proportions</td>
</tr>
<tr>
<td>Q3.</td>
<td>Conversely, what about the gains from alcohol excise... how much in your state?</td>
</tr>
<tr>
<td>Q4.</td>
<td>What do you have to say about the debate between Proportion of losses to gains?</td>
</tr>
<tr>
<td><strong>KEY AREA 5 – Impact on Law and Order</strong></td>
<td></td>
</tr>
<tr>
<td>Q1.</td>
<td>What is the relationship between drinking and law and order? Areas where alcohol misuse may affect law and order – drinking driving, intoxication and violence, smuggling of alcohol, illicit alcohol, alcohol and elections: role in riots.</td>
</tr>
<tr>
<td>Q2.</td>
<td>What do you think are solutions to prevent such problems?</td>
</tr>
<tr>
<td>Q3.</td>
<td>What is your opinion regarding prohibition? Ideas on the effectiveness of prohibition (total and partial) in context of today’s India</td>
</tr>
<tr>
<td>Q4.</td>
<td>What is the relationship between alcohol and violence?</td>
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<tr>
<td>Q5.</td>
<td>Any other law and order problems due to alcohol misuse? What about alcohol and politics? Alcohol and the election process?</td>
</tr>
<tr>
<td><strong>KEY AREA 6 – Impact on Non-users (Women, Children, Community and General Public)</strong></td>
<td></td>
</tr>
<tr>
<td>Q2.</td>
<td>Who are the persons likely to be affected?</td>
</tr>
<tr>
<td>Q3.</td>
<td>In what ways does a person’s drinking have an effect on the family?</td>
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<tr>
<td>Q4.</td>
<td>Intimate partner violence..is there any reason to believe that marital/family violence is greater in relation to alcohol users than non-users?</td>
</tr>
<tr>
<td>Q5.</td>
<td>In what ways does alcohol use in families affect children? (Foregone resources: nutrition/education/parental time/ non-food items; Violence and abuse</td>
</tr>
<tr>
<td><strong>KEY AREA 7 – Impact on Development</strong></td>
<td></td>
</tr>
<tr>
<td>Q1.</td>
<td>How do people working in development NGOs encounter alcohol problems? To what extent does it affect the proper functioning of their programmes? In what ways? Can you give details? What kind of development programmes are most affected?</td>
</tr>
<tr>
<td>Q2.</td>
<td>To what extent do Micro-finance Institutions / other lenders / other micro-entrepreneur agencies find alcohol misuse affecting</td>
</tr>
</tbody>
</table>
### Q3. Is there any relationship between alcohol use and people receiving welfare payments?

*What about programmes like the Mahatma Gandhi National Rural Employment Guarantee Act Schemes (MGNREGA)? There was some talk that people who received such welfare payments spent a larger amount on alcohol. What is your experience/knowledge from your area?*

### Q4. What is the relation between alcohol use and borrowing – whether from personal sources, local moneylenders, chit funds, or banks?

*How does this affect family finances? How does this affect poverty status? How does this affect acquisition of assets in families? How does it work with relation to spending on family occasions such as marriages, functions, holidays, puja etc.?*

### Q5. Any other social or economic impact of alcohol misuse?

*Any other points you might wish to make regarding the impact of alcohol misuse in your community? Any other points you might wish to make regarding ways in which such costs of alcohol misuse can be brought down?*

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## Procedure

1. Send written/ emailed invitations and if possible follow up with personal phone calls. Around 10-15 people per group is probably practical. It would be good to get at least two specialists from the same area of operations (e.g. two person working in the development sector) in order to encourage variety and a greater spread of information. Plan for around one to one and a half hours for the interactions.

2. Introduce yourself and the context of the meeting.

3. Yourself – representing your organization, in collaboration with the National Institute of Mental Health and Neurosciences Bangalore and the World Health Organisation - India.

4. Context - That the meeting is to learn from the invited experts - factors related to alcohol misuse and its impact in the community in depth, since the assembled people are in one way or another people who have special knowledge of their community. You could invoke the WHO Global Initiative on Alcohol as a context for the interest in the topic.

5. Obtain verbal consent - Make sure participants understand their rights, and ensure them that their identities will not be revealed in any publications/reports.

6. Establish rapport - Often participants do not know what to expect from focus group discussions. It is helpful for the facilitator to outline the purpose and format of the discussion at the beginning of the session and set the group at ease. Participants should be told that the discussion is informal, everyone is expected to participate, and divergent views are welcome.

7. Guiding Principles for the Group - Establish some ground rules – At the beginning of a focus group, it is helpful to let everyone know about some ways to make the group proceed smoothly and respectfully for all participants.
   - Only one person talks at a time.
   - Confidentiality is assured. "What is shared in the room stays in the room."
   - It is important for us to hear everyone’s ideas and opinions. There are no right or wrong answers to questions – just ideas, experiences and opinions, which are all valuable.
   - It is important for us to hear all sides of an issue – both the positive and the negative.
   - It is important for women’s and men’s ideas to be equally represented and respected.

8. Keep the pace moving. Avoid long discussions. Ensure that no one dominates the discussion by directing questions to or asking for comments from specific people, rather than always asking for an open response and waiting for someone to respond. Respect all answers and comments, and encourage all group members to respect one another, even if they disagree. Encourage members to keep their comments and answers brief so that everyone has a chance to join in. In focus groups, it is not uncommon for a few individuals to dominate the discussion. Sometimes in mixed gender groups, one gender may tend to speak more than the other. To balance participation, and ensure that every participant has an opportunity to contribute to the discussion, you might consider the following strategies:
   - Address questions to individuals who are reluctant to talk.
   - Give nonverbal cues (look in another direction or stop taking notes when an individual talks for an extended period).
   - Intervene, politely summarize the point, then refocus the discussion.

9. Pay close attention to the person speaking. Keep side conversations to a minimum, so everyone can hear the person talking. Encourage participants to listen carefully to each other, and consider the opinions of others before disagreeing with them.

10. Encourage listeners to try to find solutions to concerns and problems, rather than just listing their complaints.

11. If participants give incomplete or irrelevant answers, the facilitator can probe for fuller, clearer responses. A few suggested techniques are:
   - Repeat the question – repetition gives more time to think.
   - Pause for the answer – a thoughtful nod or expectant look can convey that you want a fuller answer.
   - Repeat the reply – hearing it again sometimes stimulates conversation.
   - Ask when, what, where, which, and how questions – they provoke more detailed information.
   - Use neutral comments – “Anything else?”

12. Minimize Pressure to Conform to a Dominant View Point - When an idea is being adopted without any general discussion or disagreement, more than likely group pressure to conform to a dominant viewpoint has occurred. To minimize this group dynamic, the facilitator should probe for alternative views. For example, the facilitator can raise another issue, or say, “We have had an interesting discussion, but let’s explore other ideas or points of view. Has anyone had a different experience that they wish to share?”

13. Recording of FGD: 3-4 rapporteurs who record views of their assigned Informant. Ideally, focus group discussions will be recorded using both tape recording equipment, and the hand-written notes of a note taker. Hand-written notes should be extensive and accurately reflect the content of the discussion, as well as any salient observations of nonverbal behavior, such as facial expressions, hand movements, group dynamics, etc. The note taker should monitor tape recording equipment and may also play a key role in keeping track of time.
Annexure 5
Field Centre Collaborators and Field staff
1. Vishakhapatnam
Site Investigator: Prof Gorur Krishna Babu, Professor of Community Medicine, Andhra Medical College
Field coordinators:
1) Dr. P. S. Surya Narayana and 2) S. Srinivas
Field investigators:
Training Schedule attended by the field staff above and Prof Krishna Babu on 15, 16 and 17 of September 2011

2. Surat, Gujarat
Site Investigator: Prof. Ritambhara Mehta, Professor of Psychiatry, Government Medical College Surat
Field Co-Ordinator: Rujal P. Bhatt
Field Workers
The field staff were first sensitized to the effects and impact of alcohol, using the slide-set developed by the NIMHANS co-ordination centre. They were then introduced to both the Family and the Individual Questionnaires, item by item. Doubts were clarified. Staff were then made to deliver the questionnaire to each other; then they applied the questionnaire in the field setting as a pilot – three such. They were then de-briefed and the questionnaires were checked for accuracy and understanding. The training was conducted by Prof. Ritambhara Mehta, and staff of the Community Medicine Department

3. Dhule, Maharashtra
Site Investigator: Prof. Muralidhar Tambe, Professor of Community Medicine, SBH Government Medical College Dhule
The field investigators hired were:
1. Mr. Pagare F.B., Ms. Deore Meena, Mr. Girase P.D., Mr. Sonawane N.L., Mr. Patil W.S., Mr. Sonawane J.B., Mr. Shaikh Munna, Unnamed
Training began on the 17th September, 2011. Approximately two 3 hour sessions with a break for lunch
-1st day: Sensitisation to alcohol and consequences of misuse;
-2nd day: Methodology of the study
-3rd day: Family questionnaire;
-Sessions were on individual questionnaire on days 4 and 5, followed by a field demonstration where each person took 2 family/individual interviews and these were reviewed on the 6th day

4. Gangtok, Sikkim
Site Investigators: Dr. Sanjiba Datta, Dr. Amit Chakrabarti, Dr. B.B. Rai
Field Co-ordinators
Ms. Laxmi Sharma, Ms. Srijana Thapa
Field Interviewers
Ms. Devika Gurung, Ms. Roma Rai, Ms. Sonam Sherpa, Mr. Raju Jairu, Mr. Tez bahadur Pradhan, Ms. Dhan Maya Chhetri, Ms. Sushma Sewa, Ms. Aarti Chettri, Ms. Deepa Tamang, Ms. Purnima Darjee, Ms. Tulasa Gurung, Ms. Sumana Rai
Training workshop held from March 23 to March 26, 2012
Duration of field work April 1 to April 30, 2012.