3 METHODOLOGY

3.1 Household Survey

3.1.1 Study areas

The study was initially planned to be conducted in households of rural, town and slum populations, in and around the city of Bangalore. Later, a decision was taken to include a small sample from an urban area to ensure completeness and comprehensiveness of the study results.

Rural From the list of *talukas* in district of (rural) Bangalore, Kanakapura *taluka* was chosen. National Institute of Mental Health and Neurosciences (NIMHANS), has been undertaking outreach services in Kanakapura *taluka* for many years. This fact was considered essential in ensuring the continuity of care even after completion of the study.

The list of villages within Kanakapura *taluka* was obtained and listed as per their size. Independent hamlets in the small and medium sized villages were excluded. Five large villages with populations of about 750 to 1000 households were identified for inclusion in the "rural" part of the survey. Kodihalli, Doddaaladahalli, Sathnur, Acchalu and Shivanahalli each situated about 75 to 83 kms from Bangalore were the selected villages.

Town The town of Kanakapura can be characterized as a transitional urban area. The town not only has a good transport network connection with Bangalore city but also has the typical characteristics of rural areas on its outskirts. The impact of the growth of Bangalore city is beginning to be noticed within the town. The town municipality has 27 wards. Those wards which had predominantly commercial activity were excluded for the purpose of this study. Of the remaining wards, five wards were randomly chosen (ward numbers: 26, 18, 07, 13, 16) and constituted the "town" component of the sample.

Slum A list of registered slums within Bangalore city was obtained from the Karnataka Slum Clearance Board. As per the list there were 389 registered slums in the city of Bangalore. As a result

of the ongoing welfare measures it was observed that many of the registered slums no longer resembled the typical slums of yesteryears. Giving due consideration to this fact and the time required for transportation (so as to reduce expenses), one large slum was chosen (Sriramapuram slum) for the "slum" component of the survey.

Urban One ward in the southern part of Bangalore city with a mainly middle class population was chosen after excluding the predominantly commercial areas. This was essentially to save transport time and also to reduce expenses.

3.1.2 Feasibility study

Considering the sensitive topic of inquiry and to finalize methodology, a feasibility study was undertaken in 2003. This feasibility study was cross-sectional and undertaken in an urban setting on four purposively sampled groups. Trained investigators utilized a pre-tested structured instrument, and interviewed 50 alcohol-users and non-users from hospital, slum, transportation workers and a defined community sample.

3.1.3 Data collection

The household survey was undertaken as a cross-sectional study across rural, town, and slum areas with an individual household as a sampling unit. Utilizing standard statistical procedures, the minimum sample required was calculated to be about 900 in each of the study areas. In addition an urban sample of about 350 households was included.

Information was collected through a door-to-door survey. Detailed socio-demographic information was collected from a responsible respondent in each household. A screening question helped to identify the alcohol-users in the age group of 16 to 60 years within the family. Based on this, each household was classified either as a user household or a non-user household. Among the user households, when there was more than one male user in the household, one respondent was picked at random for further enquiry; whenever a female user was available she was given preference over a male user. Thus there was only one respondent from each

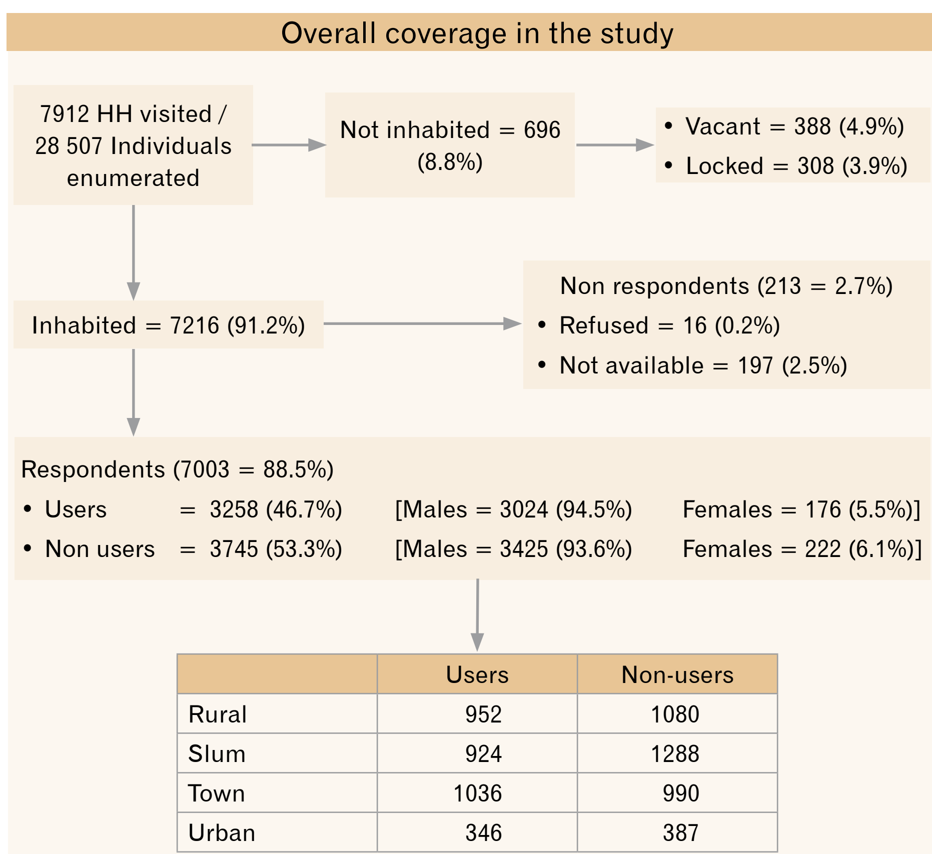
household, regardless of whether there was one or more alcohol-user within the household (n = 3258). To obtain a comparative picture between users and non-users, when more than one family member was available in the non-user household, the respondent non-user (n = 3745) was selected based on matching to the user for age (± 3 years) and sex. A minimum of three attempts were made before excluding the households from further interviews and these households were included as loss of sample.

Data gathering was done by trained research field staff using a pre-tested semi-structured questionnaire. The information gathered was similar among users and non-users with the only differentiating factor being alcohol usage and related information.

The study instrument was prepared based on the study objectives and by reviewing the available questionnaires (CAGE, AUDIT, GENACIS project questionnaire, Alcohol costing pilot study questionnaire). The study instrument was field tested and validated in the pilot study undertaken at NIMHANS Hospital and in community settings. The final study instrument had three sections viz., socio-demographic details, health and economic status of the family and individual schedule. The individual schedule had two parts: Part 1 exclusively for alcohol-users and Part 2 for all respondents. Part 1 focused on obtaining information pertaining to the use of alcohol in the past 12 months (type, duration, frequency, amount spent), and context of drinking (with whom, when and what happened). Part 2 focused on eight components: status and details of physical health, details about both unintentional and intentional injury (suicide, abuse of spouse, children, siblings, family members, or others), social aspects (running away from home, staying away from home, etc.), occupation-related issues (absenteeism, working under the influence of alcohol, losing pay, borrowing money, etc.), economic aspects (difficulty in undertaking certain household routine activities, bad practices such as gambling, lottery, etc.), emotional and psychological aspects (psychological distress, sexual relationships, etc.), legal aspects (police complaints, payment of penalties and fines, etc.), and help-seeking aspects. The study instrument is available on request.

The survey was performed between March 2004 and January 2005, a total of 7912 households were visited and 28 507 individuals were enumerated. The figure provides details of final numbers of users and non-users selected for further enquiry.

Quality control methods were in-built, both during data collection and data entry. The data obtained from individual interviews was checked for completeness, accuracy and coding. Households with incomplete



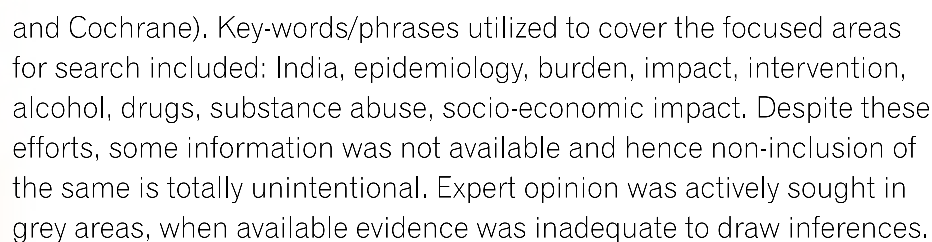
	Users	Non-users
Rural	952	1080
Slum	924	1288
Town	1036	990
Urban	346	387

information and those who could not be contacted for further interviews were excluded from the analysis. The data were analysed using Epi-info and SPSS packages.

Odds Ratios were calculated for occurrence of the reference event for users and non-users. The mean alcohol attributable expenditure was calculated for each individual event and the total expenditure incurred by the individual was pooled for the last 12 month period among both users and non-users. This information was used for assessing the overall economic impact on alcohol-users at the macro level. The available data were utilized to arrive at the socio-economic burden and impact at the family level in the analyses.

3.2 Literature Review

The literature review focused on available information for the objectives of the study within the available time period. Available secondary data sources pertaining to India primarily in the area of burden and impact of alcohol use were reviewed. Available studies were from: Department of Epidemiology library, NIMHANS Central library and Electronic database search (key databases: PUBMED, Science Direct, Ebsco, Google Scholar



and Cochrane). Key-words/phrases utilized to cover the focused areas for search included: India, epidemiology, burden, impact, intervention, alcohol, drugs, substance abuse, socio-economic impact. Despite these efforts, some information was not available and hence non-inclusion of the same is totally unintentional. Expert opinion was actively sought in grey areas, when available evidence was inadequate to draw inferences.

3.3 Qualitative Methods of Study

The study also used qualitative methods. Qualitative methods were chosen to supplement and also to validate information obtained from the quantitative method. Apart from key informant interaction and focus group interaction, informal data gathering mechanisms were also adopted. Three focus group interactions were held: one each in rural, town and slum areas.