

Original Research Article

Prevalence of alcohol dependence among men residing in an urban slum of north Chennai- A cross- sectional study

Kameshvell C¹, Rajini S², Vignesh³

Date of Submission: 01.04.2017

Date of Acceptance: 01.09.2017

Authors:

¹. Associate Professor, &2Associate Professor, Dept. of Community Medicine, SLIMS.,3. Pre-final MBBS, SLIMS.

Corresponding Author:

Dr. Kameshvell C
Associate Professor
Dept. of Community Medicine
SLIMS, Pondicherry.
E-Mail: kameshvell@gmail.com

Abstract

Background: Problems of alcohol use in India have widely attracted the attention of public, policy makers and research workers, a recent national house hold survey of drug use in the country, the only effort to document the national wide prevalence of drug use, reported that alcohol use in men was 21% and 5% among women¹. **Objective:** the study was aimed to estimate the prevalence of alcohol dependence and its associated factors among urban slum dwelling men. **Methodology:** By multi-stage sampling technique zone III of Chennai Corporation and Bhakthavachalam colony, a designated urban slum was selected. A house to house survey was conducted and 700 individuals who fulfilled the inclusion criteria were administered with basic socio demographic profile, risk assessment scale, general health questionnaire and alcohol user dependence identification test^{3, 4}. **Results:** The study revealed that the prevalence of alcohol dependence was 6.57% and harmful drinking was 9.8% in men aged 15-65 years. Chi-square test was applied, and the results showed that alcohol dependence was significantly associated with age, religion, drug use, smoking history, family history of alcohol drinking, peer group pressure, chronic illness and migrant status. There is significantly high prevalence of alcohol dependence and harmful drinking which are to be addressed by the health providers.

Key-words: alcohol use, harmful drinking alcohol dependence, GHQ, risk assessment scale and AUDIT

Introduction

Alcohol use has been showing a rising trend all over the world including India, perhaps as a result of stresses related to rapid changes in lifestyles. There is a spectrum of use among those who consume alcohol, which can range from one time use, occasional use, regular use, hazardous use and harmful use to dependence. The proportion of people indifferent groups of this spectrum varies considerably among different societies and there are differences even within each individual country. Alcohol dependence is a condition characterized by the harmful consequences of repeated alcohol use, a pattern of compulsive alcohol use and physiological dependence on alcohol (i.e., tolerance and withdrawal symptoms). This disorder is diagnosed only when these behavior become persistent and disabling or distressing. Individuals with this disorder may continue to abuse alcohol despite the knowledge that continued drinking poses significant social or interpersonal problems for them. A recent national house hold survey of drug use in

the country, the only effort to document the national wide prevalence of drug use, reported that alcohol use in men was 21% and 5% among women¹. Alcohol usage not only affects the individual but also has a greater economic impact on the family, society and the whole country. An alcohol dependent individual spends more than they earn, take loan to drink and lose an average of 20 years of their potential life expectancy. One fourth of all emergency hospital admissions, one third of all suicides and one half of all murders/domestic violence were attributed to alcohol². In spite of so much is known about the alcohol dependence the data on urban slum dwellers is lacking. So this study was done to explore the burden of alcoholic dependence and factors associated with it in an urban slum area of north Chennai.

Methodology

The study was conducted in Bhakthavachalam colony, an urban slum in division 36 under zone 3 of Chennai Corporation during January-July 2014. This zone 3 of

Chennai Corporation has more than 20 slums out of which this slum was selected by simple random table method. The selected slum has 32 streets, 2780 households with a total population of 14510. A total of 712 male study participants aged 15-65 years were interviewed by house to house survey using AUDIT questionnaire after getting informed consent. The age group of 15-65 years was chosen because it is the economically productive age. Out of the 712 individuals 4 suffered from serious mental disorder and 8 from cerebrovascular conditions were excluded from the study. House to house survey was conducted and individuals who fulfilled the inclusion criteria were administered with basic socio demographic profile, risk assessment scale, general health questionnaire and alcohol user dependence identification test^{3, 4}. If the score was > 2 in risk assessment scale then considered positive for high risk behavior and > 3 in General Health Questionnaire [GHQ] then diagnosed with some psychiatric morbidity. Similarly AUDIT questionnaire was administered for alcohol dependence wherein the study participants with score > 15 were diagnosed as alcohol dependence and those with > 8 were diagnosed as harmful alcohol drinkers.

Results

Table-1 Prevalence of alcohol dependence and harmful drinking

| Pattern of alcohol intake | Frequency | Percentage |
|---------------------------|-----------|------------|
| Life time intake | 320 | 45.7 |
| Harmful intake | 69 | 9.8 |
| Dependence | 46 | 6.57 |
| Non-user | 380 | 54.3 |

A total of 700 participants were included in this study of which the majority of the population 38.8% (272) were in the age group of 15 to 29 years and 84% were Hindus. Among the study population 95% were literate, 12% were unemployed and 85% belonged to class III and class IV socio-economic status according to modified kuppusswami scale. Of the study population unmarried men constituted 33.7% and 37% of them had history of high risk behavior. Family history of alcohol drinking was present in 64.8%, peer group pressure in 69.85%, psychiatric morbidity in 27% and chronic illness in 38.5% of the study participants. Around 50% of the population was ex-smokers and current smokers and 4% had history of drug usage. Among the total study population 45.7% had consumed alcohol in their lifetime, and the remaining 54.3% were non-users. The prevalence of alcohol dependence and harmful drinking or abuse were 6.57%

Table – 2 Alcohol dependence and associated risk factors

| Variable | Alcoholic dependence present | Alcoholic dependence absent | Total | Chi-square value | Df | P value |
|------------------------------|------------------------------|-----------------------------|-------|------------------|----|---------|
| | | | | | | |
| Age group | | | | | | |
| 15 – 29 | 1 | 271 | 272 | 53.85 | 3 | <0.001 |
| 30 – 39 | 11 | 103 | 114 | | | |
| 40 – 49 | 29 | 131 | 160 | | | |
| 50 – 65 | 5 | 149 | 154 | | | |
| Total | 46 | 654 | 700 | | | |
| Religion | | | | | | |
| Hindu | 32 | 556 | 588 | 24.4 | 2 | <0.001 |
| Christian | 13 | 47 | 60 | | | |
| Muslim | 1 | 51 | 52 | | | |
| Total | 46 | 654 | 700 | | | |
| Marital status | | | | | | |
| Married | 36 | 386 | 422 | 17.28 | 4 | <0.01 |
| Unmarried | 3 | 233 | 236 | | | |
| Divorced | 1 | 2 | 3 | | | |
| Separated | 2 | 10 | 12 | | | |
| Widowed | 4 | 23 | 27 | | | |
| Total | 46 | 654 | 700 | | | |
| Migrant status | | | | | | |
| Present | 17 | 40 | 57 | 49.73 | 1 | <0.001 |
| Absent | 29 | 614 | 643 | | | |
| Total | 46 | 654 | 700 | | | |
| Family history | | | | | | |
| Present | 15 | 439 | 454 | 23.06 | 1 | <0.001 |
| Absent | 31 | 215 | 246 | | | |
| Total | 46 | 654 | 700 | | | |
| Peer group pressure | | | | | | |
| Present | 40 | 449 | 489 | 7.03 | 1 | <0.01 |
| Absent | 6 | 205 | 211 | | | |
| Total | 46 | 654 | 700 | | | |
| Chronic illness | | | | | | |
| Present | 11 | 259 | 270 | 4.78 | 1 | <0.05 |
| Absent | 35 | 395 | 430 | | | |
| Total | 46 | 654 | 700 | | | |
| Psychiatric morbidity | | | | | | |
| Present | 34 | 155 | 189 | 58.28 | 1 | <0.001 |
| Absent | 12 | 499 | 511 | | | |
| Total | 46 | 654 | 700 | | | |
| Smoking history | | | | | | |
| Present | 29 | 315 | 344 | 58.28 | 1 | <0.001 |
| Absent | 17 | 339 | 356 | | | |
| Total | 46 | 654 | 700 | | | |
| Drug history | | | | | | |
| Present | 6 | 22 | 28 | 9.94 | 1 | <0.01 |
| Absent | 40 | 632 | 672 | | | |
| Total | 46 | 654 | 700 | | | |
| High risk behavior | | | | | | |
| Present | 4 | 255 | 259 | 16.85 | 1 | <0.01 |
| Absent | 42 | 399 | 441 | | | |
| Total | 46 | 654 | 700 | | | |
| Education | | | | | | |
| Graduate | 6 | 56 | 62 | 12.01 | 4 | <0.01 |
| Intermediate | 5 | 116 | 121 | | | |
| High school | 6 | 160 | 166 | | | |
| Middle school | 11 | 167 | 178 | | | |
| Primary school | 18 | 114 | 132 | | | |
| Total | 46 | 613 | 659 | | | |
| Occupation | | | | | | |
| Clerical / Shop owners | 22 | 127 | 149 | 16.59 | 4 | <0.001 |
| Skilled and semiskilled | 11 | 213 | 224 | | | |
| Unskilled | 11 | 98 | 109 | | | |
| Unemployed | 2 | 84 | 86 | | | |
| Total | 46 | 522 | 568 | | | |

and 9.8% respectively [Table I]. Alcohol dependence was associated significantly with age, religion, marital status,

family history of drinking, peer group pressure, chronic illness, psychiatric morbidity, smoking history, drug history, high risk behavior and educational status [Table III].

Discussion

The results in this study showed that a high prevalence of life time intake of alcohol when compared to studies conducted Punjab and all over India were it was 18.3%^{5,6}. The prevalence of alcohol dependence too was higher than the Delhi and Rajasthan studies which reported a prevalence of 1.7% and 3.6% respectively^{7, 8}. Though this higher prevalence be attributed to diverse cultural practices and varied methodological approaches, the role of government in Tamil Nadu cannot be negated. In this study 40-49 years age group was the peak age group for alcohol dependence where 63% of the dependent were found even though they constitute 23% of study population. This is of concern as this age group is the most economically productive one. The prevalence of alcohol dependence was highest among Christians followed by Hindus where as it was negligible among Muslims similar to the study by V K Verma study⁹. In this study the prevalence of alcohol dependence was 29.8% among migrants which was only 4.51% among non-migrants, the difference was found to be significant. This may be because of frustration, unemployment, discrimination, away from relatives and feeling of loneliness associated with migration. The prevalence of alcohol dependence was 8.5% among married and living with spouse and 66% among single living (unmarried, divorced, widowed, separated) and it was statistically significant. This study revealed alcohol dependence was significantly associated with smoking history, drug history and high risk behavior which was comparable to the Paulose Biju et al study¹⁰. Even though this study has showed the results similar to other Indian and international studies, each differed in terms of methodologies, tools used and characteristic of the study population. Since this study was done as a cross sectional one, the casual relationship between alcohol dependence and the factors should be considered with caution. Certain factors like number of liquor shops in the locality, its distance, time of availability, presence of bar facilities which influence the drinking habits of any population was not studied.

Conclusion

Our results have showed that there was significantly high prevalence of alcohol users and alcohol dependence in the study population. Individuals with family history of drinking and belonging to economically productive age group had greater prevalence. Hence our focus should be

more inclusive involving the whole family and community rather than the user alone. School based alcohol awareness program, sensitizing & training medical/paramedical personnel's at primary care level and involvement of social & religious movements may help in tackling the menace of alcohol in long run.

Acknowledgement

This paper was issued from the research project registered and supported by the Head of the Department, Institute of Community Medicine, Madras Medical College, Chennai.

Conflicts of interest

The authors had declared no conflict of interest

Reference:

1. Benegal V (2005) [India: Alcohol and Public health](#) (Invited Editorial). *Addiction*. 100: 1051-1056
2. Deborah morrow: alcohol abuse statistics, www.alcoholismguide.org/alcohol-abuse-statistics.html
3. DP Goldberg: Identifying psychiatric illness among general medical patients, *Br Med J (Clin Res Ed)*. 1985 Jul 20;291(6489): 161-162
4. John B Saunders, Olaf G. Aasland, Thomas F. Babor, Juan R. De La Fuente' & Marcus Grant: development of AUDIT, WHO collaborative project on early detection of persons with harmful alcohol consumption II, *addiction*. Volume 88, issue 6, pages 791-804, June 1993.
5. Singh J, Singh G, Mohan V & Padda AS: A comparative study of prevalence of alcohol users among the male individuals in an urban and rural area of Amristar district, Punjab. *Indian J Community medicine* 2000; 25: 73-78
6. Srivastava A, Pal H, Dwidide SN, Pandey A: national household survey of drug abuse in India, report submitted to Indian ministry of social justice and empowerment and the United Nations office for drugs and crime.
7. Mohan D, Chopra A and Sethi H: incidence estimates of substance use disorders in a cohort from Delhi, *Indian journal of medical research* 115; 128-135
8. Sundaram K, Mohan D, Advani GB, Sharma HK, Bajaj JS: alcohol abuse in a rural community in India part I, epidemiological study, drug and alcohol dependence 14:27-36

9. V K Varma, Singh A, Singh S, Malhotra A: extent and pattern of alcohol use and alcohol related problems in north India, Indian J psychiatry, 22:331-337

10. Paulose Biju & Srinivasan krishnamachari: high risk behavior following alcohol use in alcohol dependent men, Indian J Med Res 129, April 2009, pp 376-381.