RESEARCH ARTICLE

HAZARDOUS, HARMFUL AND DEPENDENT ALCOHOL USERS ACCORDING TO AUDIT IN AN URBAN SLUM, MEERUT

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ABSTRACT

Background: Alcohol consumption is the world's third largest risk factor for disease and disability; in middle-income countries, it is the greatest risk. Approximately 4.5% of the global burden of disease and injury is attributable to alcohol. Alcohol is a causal factor in 60 types of diseases and injuries and a component cause in 200 others. Alcohol is attributed to nearly 3.2% of all deaths and results in a loss of 4% of total DALYs (58 million).

Aims & Objective: To assess the pattern of alcohol use among the males aged >15 years in the urban slum, Multan Nagar in Meerut.

Material and Methods: A cross-sectional study was conducted in the catchment area of UHTC (Urban Health and training Centre) among 324 males aged > 15 years. Data was collected by home visit using WHO questionnaire (AUDIT: Alcohol use disorder identification test) along with other questions related to the type, initiation and reason behind alcohol use. Chi square test followed by logistic regression was applied to know the association of alcohol use with the socio-demographic determinants.

Results: According to the AUDIT score, Hazardous, Dependent and harmful drinkers were 7.7%, 9.2% and 2.4% respectively. Most common age of onset was 20-30 years (46.9%) among the drinkers with most common reason being peer pressure (13.6%). Logistic regression was applied and marital status, family history of alcohol use and caste retained their statistical significance (p-value< 0.05, 95% confidence interval).

Conclusion: It can be concluded that early age of onset and peer pressure are the alarming challenges for the eradication of this social evil.

KEY-WORDS: Alcohol Use; Hazardous; Harmful; Dependent Users; WHO; Audit

Introduction

To seek pleasure is man's innate nature. Poetry, art, theatre and drama are evidence to this. The Freudian pleasure- principle, however simplistic, sharply focuses on this driving force that sustains life.

Of all addictions, it is the addiction to alcohol that remains the most important. Perhaps, this is because alcohol is probably the most commonly used drug. The word alcohol is derived from the Arabian term 'al-kuhul' which means 'finely divided spirit'.

Alcohol use has been an issue of great ambivalence throughout the rich and long history of the Indian subcontinent. The behaviours and attitudes about alcohol use in India are very complex, contradictory and convoluted because of the many different influences in that history. The writings of the renowned medical practitioners, Charaka and Susruta, added new lines of thought, including arguments for "moderate alcohol use." The fourth period (1800 to the present) includes the deep influence of British colonial rule and the recent half century of Indian independence, beginning in 1947.[1]

WHO estimates for the South East Asia countries indicate that one-fourth to one-third of male population drink alcohol.[2] There is increasing trend among women.[3] In India, the number of alcohol users in 2005 estimated were 62.5 million, with 17.4% of them (10.6 million) being dependant users.[4] Approximately 20–30% of

hospital admissions are due to alcohol-related problems.[5]

Alcohol use is increasing in developing countries but reliable data is not available. From a public health perspective, the global burden related to alcohol consumption, both in terms of morbidity & mortality is considerable in most parts of the world.

Though large and nationally representative epidemiological studies on alcohol consumption have not been carried out in India, no such study regarding the same has been conducted in Meerut till date which necessitates conducting such study in this area.

Aim: To assess the pattern of alcohol use among the males aged ≥15 years in the urban slum, Multan Nagar in Meerut.

Materials and Methods

Study Design: Community based cross- sectional study

Setting: Urban Slum, Multan Nagar in the field practice area of the department of Community Medicine, SMC (Subharti Medical College), Meerut among males aged ≥15 years residing in the study area during September 2010 to October 2011.

Sample Size: Sample size for the proposed study was calculated according to National Family Health Survey-3[6] where prevalence of alcohol use in U.P. was given as 25.3% in males, therefore the adequate sample size calculated was approximately 324 assuming 10% non-response and considering 5% absolute error.

Sampling Technique: Simple Random Sampling Technique

Methodology: The proposed study was conducted in the urban slum of Multan Nagar in the field practice area of the Department of Community Medicine, SMC, Meerut. First approval from the ethical committee was obtained. Written consent was obtained from each participant after explaining about the study. The required sample

was taken using Simple random sampling technique.

Sampling universe was 2112 registered families in the study area and the sampling unit was a family in this study. All male members aged ≥15 years were taken from each household, where on an average there were 2 males aged ≥15 years based on the demographic profile of the area, therefore 324/2=162 households were taken in order to cover the required sample size.

Individual unit (family) constituting the sample was randomly selected by Random number table method. All the male members aged ≥15 years were taken from each family.

Research Tool: Data was collected by home visit using WHO questionnaire (AUDIT: Alcohol Use Disorder Identification Test) as study tool by interviewing each study subject.[7] Additional information was obtained on the socio-demographic and other determinants of alcohol use.

Statistics: Data was analysed by using appropriate statistical tests by SPSS 19.0 version and the results were expressed in proportions. Chi-square test was used and if the cell frequency was less than 5, the result was obtained by Fischer Exact test.

Logistic regression was used to analyse the data for independent variables of alcohol use. Appropriate graphs were used to show the results.

Definitions Used in the Study: The following definitions were used according to audit:

Current Drinker: Current drinkers are those who accepted drinking alcohol during the past one year.[8]

Flemming (1996) allows the classification of problem drinkers into more specific subgroups as hazardous, dependent and harmful drinkers.[9]

Questions 1-3 assess the quantity and frequency of drinking and are used to detect 'at risk' alcohol consumption. A combined AUDIT score ≥ 4 classifies drinking as **hazardous**.

Questions 4-6 screen for signs and symptoms of alcohol dependence.

A combined AUDIT score ≥ 4 indicates the emergence of **alcohol dependence**.

Questions 7-10 enquire about the problems caused by alcohol consumption and adverse consequences of drinking. A combined AUDIT score ≥ 4 indicates the existence of **harmful drinking.**

Results

The hazardous drinkers were 7.7% according to audit where Questions 1-3 assess the quantity and frequency of drinking and are used to detect 'at risk' alcohol consumption. A combined audit score ≥ 4 classifies drinking as hazardous.

9.2% were dependent drinkers which were screened by Questions 4-6 screen for signs and symptoms of alcohol dependence. A combined AUDIT score ≥ 4 indicates the emergence of alcohol dependence.

Questions 7-10 enquire about the problems caused by alcohol consumption and adverse consequences of drinking. A combined AUDIT score ≥ 4 indicates the existence of harmful drinking which were only 2.4% as harmful drinkers**.** (Table 1)

Table-1: Pattern of Alcohol Consumption in the Study Population

Pattern of alcohol consumption	No.	%
Hazardous Drinkers	25	7.7
Dependent Drinkers	30	9.2
Harmful Drinkers	8	2.4

Among the current drinkers, the most common type of liquor was Indian Made Foreign Liquor (57.3%) followed by local beverages (46.9%). (Figure 1)

The most common age of onset in current drinkers was 20-30 years (46.9%) followed by 10-20 years (33.4%). It was further observed that 29.2% started drinking between the age of 15-20 years, while those starting between 10-15 years were only 4.2%. (Figure 2)
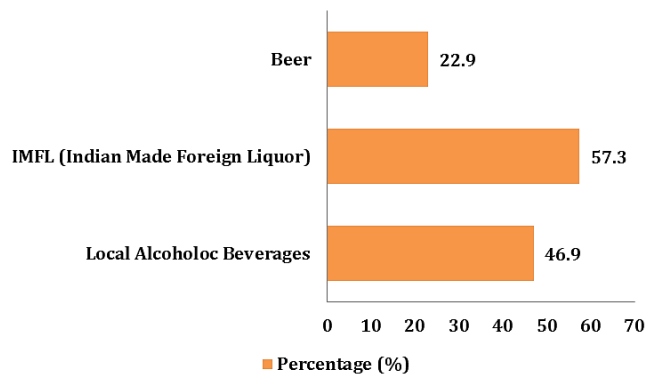

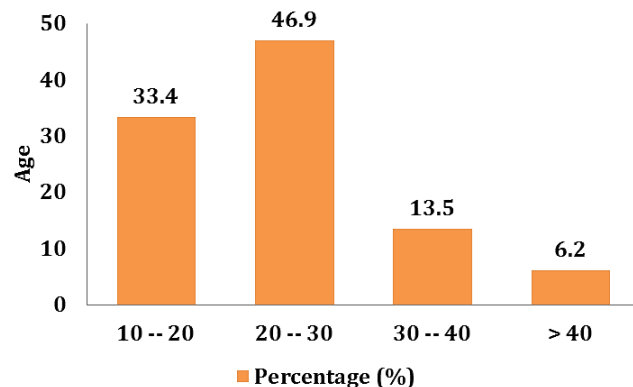**Figure-1: Distribution of Current Drinkers According to the Type of Liquor**

Figure-2: Distribution of Current Drinkers According to the Age of Onset

Table-2: Distribution of the Current Drinkers in Relation to the Reasons for the First Drink

Reasons for the Intake of First Drink*	Current Drinkers (n=96)	
	No.	%
Father or relative drinks	3	3.1
To confirm to social status or norms	8	8.3
Peer Pressure	64	66.7
Curiosity to drink	2	2.1
To relieve stress or pressure	7	7.3
Others*	14	14.6

*Multiple responses were given

Table-3: Distribution of the Current Drinkers in Relation to the Reasons for the Continuing Drink

Reasons for the Intake of First Drink*	Current Drinkers (n=96)	
	No.	%
To be sociable	31	32.3
To forget worries	5	5.2
To think and work better	2	2.1
To cheer up	2	2.1
To relax	10	10.4
Peer pressure	37	38.5
Others*	14	14.6

*Multiple responses were given

Most of the study subjects indulged into this habit due to peer pressure (66.7%) while only 2.1% reported that the cause was curiosity to drink. Other reasons were its use as a part of medicine

(1.0%); used in order to relieve from physical exertion (4.2%); its use out of desire (4.2%) and its use due to job in army (5.2%). (Table 2)

Majority of the study subjects continued to drink due to peer pressure (38.5%), in order to be sociable (32.3%) while only 2.1% of current drinkers reported the cause to cheer up or think and work better. Other reasons were being habitual (3.1%); its use due to physical exertion (3.1%); its use out of desire (3.1%); type of work was such that demanded its use (4.3%) and its use as a medicine (1.0%). (Table 3)

Discussion

In the present study as per the AUDIT score, Hazardous drinkers were 7.7%; dependent drinkers were 9.2% while only 2.4% were harmful drinkers.

Dhupdale N. et al (2006)[10] stated Hazardous drinkers: 76.2%, harmful drinkers: 14.3% and alcohol dependents: 9.5% respectively in their study done in Goa.Seale Paul J. et al (2002)[9] stated 94.2% as hazardous, 36.5% as dependent and 80.2% as harmful drinkers which were much higher than our study. As this study was from South America which is known for higher rates of alcohol use, we expect higher rates of problem drinkers. Bergman H. et al (2001)[11] reported that 17.9% of men had hazardous drinking pattern in Sweden of alcohol use which is higher than that seen in the present study. Brisibe S. etal (2011)[12] reported alcohol dependence of 12.73% in their study which is higher than that seen in the index study. Pengpid S. et al (2011)[13] indicate that 41.2% of men were found to be hazardous drinkers, and 3.6% of men meet criteria for probable alcohol dependence.

As far as the type of alcohol is concerned, among the current drinkers, the most common type of liquor was Indian Made Foreign Liquor (57.3%) followed by local beverages (46.9%).Our results are consistent with those of Indian studies like Gupta P.C. et al (2005)[14], Gururaj G. et al (2006)[15], Khosla et al (2008)[16], John A. et al (2009)[17] and Girish N. et al (2010)[18] and international study like Brisibe S. et al (2011).[12]

The results of the present study are inconsistent with the findings of Meena et al (2002)[19], Negi K.S. et al (2003)[20], Deswal B.S. et al (2006)[21] who found local beverages as the most common type of liquor. Seale P. J. et al (2002)[9] in their study reported beer as the most common type.

Age of initiation in the present study is that the most common age of onset in current drinkers was 20-30 years (46.9%) followed by 10-20 years. It was further observed that 29.2% started drinking between the age of 15-20 years, while those starting between 10-15 years were only 4.2%.Similar findings were observed in Singh J. et al (2000)[22], Deswal B.S. et al(2006)[21], John A. et al (2009)[17], Meena et al (2002)[19], Khosla et al (2008)[16] and Ahmad A. et al (2009)[23].

Reason for drinking in the present study was that most of the study subjects indulged into this habit due to peer pressure (66.7%) while only 2.1% reported that the cause was curiosity to drink. These findings are consistent with the findings of Ghulam R. et al (1996)[24], Singh J. et al (2000)[22], Meena et al (2002)[19], Negi K.S. et al (2003)[20] and Khosla et al (2008)[16] while not consistent with those of Girish N. et al (2010)[18] and Singh J. et al (2000).[22]

Main limitation of this study is that there is an element of recall Bias in the present study.

Conclusion

Most common type of drink was IMFL followed by local beverages. Most common age of onset was 20-30 years in current drinkers. Most common reason for the starting and continuation of drinking was peer pressure. Thus, emphasis should be made on the factors which are related to the early initiation of alcohol use and steps should be taken to prevent the youths from being influenced by their peers.

Though peer pressure has come out as an important reason for alcohol use but this early initiation of alcohol use which is decreasing with time has come out as a fatal situation in the upbringing of youths who are the future of our country and on which all our dreams rely.

References

1. Sharma HK, Tripathi BM, Pelto PJ. The Evolution of alcohol use in India: AIDS Behav. 2010 Aug; 14 Suppl 1:S 8-17.
2. Gururaj G, Girish N, Benegal V, Chandra V, Pandav R. Public health problems caused by harmful use of alcohol – Gaining less or losing more? Alcohol Control series 2, World Health Organisation. New Delhi: Regional Office for South East Asia; 2006.
3. Obot SI, Room R. Alcohol, Gender and drinking problems: Perspectives from low and middle income countries. Department of Mental health and Substance abuse. Geneva: World Health Organization; 2005.
4. Ray R. National survey on extent, pattern and trends of drug abuse in India. Ministry of Social Justice and Empowerment, New Delhi: Government of India and United Nations Office on Drugs and Crime; 2004.
5. Benegal V, Gururaj G, Murthy P. Project report on a WHO multicentre collaborative project on establishing and monitoring alcohol's involvement in casualties, 2000-01. Bangalore: NIMHANS; 2002.
6. Meerut. Available from URL: http://enwikipedia.org/wiki/meerut (Assessed on 5.7.11).
7. Mohan D, Chopra A, Sethi H. The co-occurrence of tobacco & alcohol in general population of Metropolis Delhi. Indian J Med Res. 2002 Oct; 116: 150-4.
8. Saunders JB, Aasland OG, Babor TF, Juan R, Fuente DL, Grant M. Development of the Alcohol Use Disorders Identification Test (AUDIT): WHO collaborative project on early detection of persons with harmful alcohol consumption - II. Addiction; 1993, June; 88 (6): 791–804.
9. Seagle JP, Seagle JD, Alvarado M, Robert L, Vogel, Terry BN. Prevalence of problem drinking in a Venezuelan Native American population: Alcohol and alcoholism. 2002; 37(2) :198-204.
10. Dhupdale NY, Motghare DD, Ferreira AMA, Prasad YD. Prevalence and pattern of alcohol consumption in rural Goa: Indian Journal of Community Medicine. 2006 April-June; 31(2).
11. Bergman H and Kellman H. Alcohol use among Swedes and a psychometric evaluation of the AUDIT: Alcohol and alcoholism. 2001; 37(3): 245-251.
12. Brisibe S, Ordinioha B. Socio-demographic characteristics of alcohol abusers in a rural Ijaw community in Bayelsa State, South-South Nigeria. Annals of African Medicine 2011; 10 (2): 97-102.
13. Pengpid S, Peltzer K, Heever HVD. Prevalence of alcohol use and associated factors in urban hospital outpatients in South Africa Int. J. Environ. Res. Public Health. 2011; 8: 2629-2639.
14. Gupta PC, Saxena S, Pednekar MS, Maulik PK. Alcohol consumption among middle-aged and elderly men: A community study from Western India. Alcohol & Alcoholism. 2003; 38 (4): 327–331.
15. Gururaj G, Girish N, Benegal V, Chandra V, Pandav R. Burden and Socioeconomic impact of alcohol, The Bangalore Study, World Health Organization, South East Asia Regional office, New Delhi: 2006.
16. Khosla V, Thankappan KR, Mini GK, Sharma PS. Prevalence & predictors of alcohol use among college students in Ludhiana, Punjab. India Indian J Med Res. 2008 July; 128 (1): 79-81.
17. John A, Barman A, Bal D, Chandy G, Samuel J, Thokchom M. Hazardous alcohol use in rural southern India: nature, prevalence and risk factors. The National Medical Journal of India, 2009; 22(2).
18. Girish N, Kavita R, Gururaj G, Benegal V. Alcohol Use and Implication for Public Health: Patterns of Use in Four Communities, Indian Journal of Community Medicine 2010 April; 35(2).
19. Meena, Khanna P, Vohra AK, Rajput R. Prevalence and pattern of alcohol and substance abuse in urban areas of Rohtak city. Indian J. Psychiatry. 2002; 44(4): 348-352.
20. Negi KS, Kandpal SD, Rawat CMS. Prevalence of alcoholism among the males in a rural and urban area of district Dehradun (Uttaranchal). Indian Journal of Preventive and Social medicine. 2003; 34 (3&4).
21. Deswal BS, Jindal AK, Gupta KK. Epidemiology of alcohol use among residents of remote hills of Arunachal Pradesh: Indian Journal of Community Medicine 2006 April –June; 31(2).
22. Singh J, Singh G, Mohan V, Padda AS. A comparative study of prevalence of regular alcohol users among the male individuals in an urban and rural area of district Amritsar, Punjab. Indian Journal of Community Medicine. 2000; 25 (2).
23. Ahmed A, Khalique N, Khan Z. Analysis of substance abuse in male adolescents: Iranian Journal of Paediatrics 2009; 19(4): 399-403.
24. Ghulam R, Rahman I, Naqvi S, Gupta SR. An epidemiological study of drug abuse in urban population of Madhya Pradesh. Indian J. Psychiatry. 1996; 38 (3): 160-165