ORIGINAL ARTICLE
pISSN 0976 3325 | eISSN 2229 6816
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A STUDY ON PATTERN OF ALCOHOL USE USING AUDIT AMONG THE COLLEGE STUDENTS IN A MEDICAL COLLEGE OF NORTH INDIA

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Financial Support: None declared

Conflict of interest: None declared

How to cite this article:
Chaudhary V, Katyal R, Singh SP, Joshi HS, Upadhyay D, Singh A. A Study on Pattern of Alcohol Use using AUDIT among the College Students in a Medical College of North India. Ntl J of Community Med 2015; 6(2):120-124.

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Date of Submission: 25-03-15
Date of Acceptance: 23-06-15
Date of Publication: 30-06-15

ABSTRACT

Background: Alcohol and other substance use by medical students poses risks to them and can also have serious consequences on their effectiveness and fitness to practise as tomorrow's doctors. The aim of the study was to find out the prevalence of alcohol use among the undergraduates of Rohilkhand Medical College, Bareilly and the factors affecting its use.

Methodology: This cross- sectional study was conducted among the undergraduates of Rohilkhand Medical College, Bareilly using the WHO questionnaire (AUDIT). Data was entered, coded, recoded, and analysed using SPSS (Statistical Package for Social Sciences) and suitable statistical tests were applied along with logistic regression to know the independent association of the factors of alcohol use.

Results: There is a significant association of alcohol use among the medical student's family history and type of family along with the mother's occupation. On application of regression analysis, after nullifying the effect of confounders, only mother's occupation was found to be significantly associated.

Conclusion: It is alarming that the parentral behavior towards alcohol use has significant impact on their children's behavior and thereby it is clear that one should be conscious about their deeds.

Key words: Pattern of alcohol use, hazardous, harmful and dependent users.

INTRODUCTION

College and university students in many countries are at increased risk for heavy drinking, with serious immediate health risks (e.g. drink-driving and other substance use), and longer-term risks (e.g. alcohol dependence) [1]. Certainly, alcohol consumption of college students has impact on the students themselves and also the college community in general, where the misuse of alcohol can lead to a wide variety of consequences, the most severe being alcohol abuse, dependence, and death [2].

Drinking behaviours among medical students have important implications for the health of the general population. Firstly, physicians and future physicians are important opinion leaders

and role models in terms of health related behaviours. Secondly, medical students' own drinking behaviours might shape their beliefs about levels of consumption that are normal or safe, particularly in the absence of specific knowledge about evidence based drinking guidelines. Finally, the drinking behaviours of medical students might influence their attitudes and comfort about counseling those who drink excessively; there is a strong and consistent relation between physicians' personal health practices and their counselling practices,[3] including their practices around alcohol.[4]

Alcohol use has been an issue of great ambivalence throughout the rich and long history of the Indian subcontinent. The behaviors and attitudes about alcohol use in India are very complex, contradictory and convoluted because of the many different influences in that history. The pattern of drinking in India has undergone a change from occasional & ritualistic use to being a social event [5].

The harmful use of alcohol is a particularly grave threat to men. It is the leading risk factor for death in males ages 15–59, mainly due to injuries, violence and cardiovascular diseases. Globally, 6.2% of all male deaths are attributable to alcohol, compared to 1.1% of female deaths. Men also have far greater rates of total burden attributed to alcohol.[6] Alcohol is attributed to nearly 3.2% of all deaths and results in a loss of 4% of total DALYs (58 million) [7]. WHO estimates for the South East Asia countries indicate that one-fourth to one-third of male population drink alcohol [8]. There is increasing trend among women [9].

The rationale of this study is a step to acknowledge the pattern of alcohol use in the youngsters in order to take suitable measures to curb this evil.

METHODOLOGY

A descriptive type of epidemiological study was conducted among the medical students of Rohilkhand Medical College, Bareilly, U.P. in which all the students present at the time of study were included. After ethical approval from the research ethics committee, data was collected using WHO questionnaire (AUDIT: Alcohol use disorder identification test) [10] as the study tool. Additional information was obtained on the sociodemographic and other determinants of alcohol use.

The AUDIT is a 10-question alcohol screening instrument developed by W.H.O. and validated in six-country sample from four industrialized and two developing countries. Questions included in the instrument showed reliability across a wide range of cultural settings. The AUDIT has been shown to be highly sensitive (80%) and specific (89%) screening instrument.

Persons scoring 8 or more on AUDIT were considered as problem drinkers[11]. Persons scoring 1-7 on Audit were considered as non problem drinkers[12].Flemming (1996) allows the classification of problem drinkers into more specific subgroups as hazardous, dependent and harmful drinkers[13].

Students were provided with self-administered questionnaires to complete during the last 10 minutes of lectures that they were attending. Participation was voluntary and anonymous, no monetary or course credit incentives were provided to participants, and data were confidential and protected.

The results were analyzed using the Statistical Package for the Social Sciences 12.0. Data was coded, entered and analyzed using the Statistical Package for Social Sciences (SPSS). A descriptive analysis was done to summarize information. Chi-square test was used to test significance between variables and regression analysis was done to nullify the effect of the confounders. A p-value less than 0.05 were considered statistically significant.

RESULTS

The pattern of drinking among the medical students shows that about 87.3% are non-problem drinkers. 6.8% of the alcohol users are hazardous, 2.3% are harmful and 3.6% are dependent users.

It is quite evident that there though there is no significant relationship with the urban/rural background (p-value=0.135). As far as the religion is concerned, the addiction to alcohol has no association with it(p-value=0.373) .Similarly, as highlighted in table 2, father's occupation has no significant association(p-value=0.732). Type of family whether nuclear or joint also has significant association with the habit of drinking (p-value=0.478). It is quite evident that the mother's occupation whether working or not has an effect on the indulgence into alcohol use. (p-value=0.000).

Table 1: Association of socio-demographic factors with the drinking status

	Non-Problem Drinkers (%)	Problem Drinkers (%)	Total	χ^2value	df	p-value	OR
Residence area							
Urban	165 (88.7)	21 (11.3)	186	2.237	1	0.135	2.037
Rural	27 (79.4)	7 (20.6)	34				
Religion							
Hindu	162 (88.5)	21(11.5)	183	1.970	2	0.373	1.284
Muslim	18 (78.3)	5(21.7)	23				0.608
Others	12 (85.7)	2(14.3)	14				Ref
Type of family							
Nuclear	134 (90.5)	14 (9.5)	148	4.348	1	0.037	2.31
Joint	58(80.6)	14(19.4)	72				
Family Size							
4 or less	82 (54.3)	69 (45.7)	151	0.503	1	0.478	0.811
5or more	41(59.4)	28(40.6)	69				

Table 2: Association of Parent's occupation and family history with the drinking status

	Non-Problem Drinkers (n=192)(%)	Problem Drinkers (n=28) (%)	Total	χ^2value	df	p-value	OR
Mother's occupation							
Housewife	121(98.4)	2(1.6)	123	30.952	1	0.000	22.15
Working	71(73.2)	26(26.8)	97				
Father's occupation							
Business	94(87.0)	14(13.0)	108	0.623	2	0.732	1.162
Private	46(90.2)	5(9.8)	51				1.592
Govt. Job	52(85.2)	9(14.8)	61				Ref
Family History of alcohol use							
Yes	138(90.2)	15(9.8)	153	9.942	1	0.002	2.215
No	54(80.6)	13(19.4)	67				

Table 3: Predictors of alcohol use among the medical students: A Multivariate Logistic Regression Analysis

Variables	B-coefficient	p-value	95% CI
Residence area			
Urban	0.390	0.563	0.394-5.539
Rural	Reference	-	
Religion			
Hindu	0.210	0.817	0.208-7.320
Muslim	-1.119	0.350	0.031-3.409
Others	Reference	-	
Type of family			
Nuclear	1.093	0.087	0.853-10.424
Joint	Reference	-	
Size of family			
4 or less	-1.028	0.050	0.128-1.002
5or more	Reference	-	
Mother's occupation			
Housewife	3.557	0.000**	6.40-192.19
Working	Reference	-	
Father's occupation			
Business	-0.077	0.898	0.287-2.993
Private	0.622	0.384	0.459-7.569
Govt. Job	Reference	.	
Family History			
Yes	0.401	0.434	0.547-4.078
No	Reference	-	

**p-value<0.001.

Having a positive family history of alcohol use, definitely has association with alcohol use (p-value=0.002). It is quite evident that on nullifying the effect of confounding factors, only mother's occupation stands out significant on regression analysis (Table 3).

DISCUSSION

The indexed study highlights that the pattern of drinking among the medical students shows that about 87.3% are non-problem drinkers, 6.8% of the alcohol users are hazardous, 2.3% are harmful and 3.6% are dependent users. Similarly, the study in Mexican in-patients reported that an AUDIT score ≥ 8 was found in 23.4% of the sample (43.2% in men vs. 3.6% in women). [14] . The study in Netherlands reported the prevalence of problem drinking of 9%. [15] The study in Venezuela stated the prevalence of 86.5% among males and 7.5% among females. Analysis of questions 1-3 revealed 94.2% of these men and 22.6% of women exhibited hazardous drinking; 92.3% of these men reported occasional drinking. Similarly, analysis of 7-10 questions revealed 80.8% of men and 7.5% of women were classified

as harmful drinkers. Regarding questions 4-6, 63% were unable to stop drinking, 42% had failed to meet the obligations due to drinking, 40% needed first drink in the morning. 36.5% men met the subscale criteria for alcohol dependence. 79.6% of the males reported one or more sign of dependence during the past year [13]. The study in Brazil reported that prevalence of alcohol abuse/dependence was 13.1% in men and 4.1% in women. In the multiple logistic regression model, demographic, socioeconomic and behaviour variables retained their statistical significance.[16] The study in Urban Tanzania reported the overall prevalence of 17.2% while problem drinkers were only 5.7%[17]. The study in South Africa indicate that 41.2% of men and 18.3% of women were found to be hazardous drinkers, and 3.6% of men and 1.4% of women meet criteria for probable alcohol dependence or harmful drinking as defined by the Alcohol Use Disorder Identification Test (AUDIT) [18]. The study in Nigeria reported that the 12-month prevalence of alcohol abuse in the community was 33.23% (AUDIT score >8) while alcohol dependence was seen in 12.73%. 57.76% were social drinkers (AUDIT score<8) and 9.06% were abstainers [19].

The study on alcohol consumption in Punjab stated the prevalence of 49.6% among males[20]. The study in Ajmer showed that prevalence of alcohol abuse in the sample was 24.7% (36.1% for males and 13.4% for females) and the percentage of dependents was 3%[21].

The study in rural Goa stated according to AUDIT, hazardous users were 76.2%, harmful (14.3%) while 9.5% were dependent users[22]. The study in Chandigarh declared that 10.7% were dependent in the urban slums while 3.12% fulfilled dependence criteria in rural areas [23] . The study in Goa stated that 8.2% of men and 0.7% of women were classified as problem drinkers [24]. The study in Kolar in Southern India stated the results that 28.17% had a lifetime use of alcohol while 25.39% were current drinkers and 17.06% were problem drinkers [25].

As far as the association of the socio-demographic factors with hazardous, harmful and dependent alcohol users is concerned, no study has been found to be conducted.

CONCLUSION

Belonging to a family with positive history of alcohol use has an impact on the student's behavior towards alcohol use. Similarly, the working status of mother can protect them from indulgence into alcohol use. It is very much clear that looking at the pattern of alcohol use among the problem drinkers, there is a stringent need of proper guidance and improvement in the values to enlighten them and refrain them from this evil of addiction

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