Original Article

Pattern and Trend of Alcohol Abuse: A Study in a Tribal Community of Hill Tract

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Abstract

Background: *Hazardous use of alcohol is a public health problem which accounts for 4.0% of global burden of disease. There are very few studies about alcohol consumption trend among tribal in Bangladesh. We investigated the pattern and trend with reasons for alcohol use in Hill Tract dwellers with the aim to increase the awareness of this problem.* ***Objective:*** *To identify the pattern of alcohol use and its effect among the tribal so that effective measures can be taken to eliminate the social evil.* ***Materials and method:*** *This cross-sectional study was conducted among tribal community of Chittagong Hill Tracts, Rangamati district, Bangladesh between June 2014 to February 2015. Out of 846 people coming in 'Naniarchor' and 'Langadu' upazila health complexes 716 (84.6%) constituted the study group. The CAGE test was used as a screening test in determining alcohol dependence.* ***Results:*** *The prevalence of alcohol consumption among tribal is 48.9%. Rural areas (65%) are the most vulnerable area. Home-made alcohol (61%) was the most patronized alcoholic beverage. Most of the cases (82%) started alcohol before 30 years of age and 46% participants took alcohol daily. To get pleasure is the commonest factor for taking alcohol (57%). Physical and mental degenerations were found in most of the alcoholic cases (88%).* ***Conclusion:*** *The results of the present study are likely to increase the awareness of the problem in hill areas and help the concerned authorities to shape the requisite alcohol control policies in these regions.*

Keywords: *Alcohol consumption; alcohol dependence; tribal; Chittagong Hill Tracts.*

Delta Med Col J. Jan 2016;4(1):4–8

Introduction

Alcohol-abuse and alcoholism are one of the major public-health problems in both developed and developing countries.[1,2] The 32nd World Health Assembly declared that "problems related to alcohol and particularly to its excessive consumption rank among the world's major public health problems and constitute serious hazards for human health, welfare and life".[2] The World

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Health Organization (WHO) estimated that there are about two billion consumers of alcoholic beverages and 76.3 million people with diagnosable alcohol-use disorders worldwide.[3] Alcohol consumption accounts for nearly 3.2% of all days and 4% of all disability-adjusted life-years (DALYs) lost. The risks relating to alcohol are linked to the pattern of drinking and the amount of consumption. Many forms of excessive drinking cause substantial risk or harm to the individual. These include high-level drinking each day, repeated episodes of drinking to intoxication, and drinking that makes a person alcohol-dependent. While persons with dependence on alcohol are most likely to incur high levels of harm, the bulk of harms associated with consumption of alcohol occurs among non-dependent drinkers because they are more in number than dependents.[4] Therefore, the identification of drinkers with various types and degrees of at-risk alcohol consumption has a great potential to reduce all types of alcohol related harms.[5] Changing social norms, urbanization, increased availability, high-intensity mass marketing, and relaxation of overseas trade rules, along with the poor level of awareness, have contributed to increased alcohol use.[6]

In Hill Tracts, 30-50% of the population resides in hilly areas. Due to their deplorable socioeconomic status, hill-dwellers often remain the worst victims of the physical, psychological and social consequences of alcohol-use. However, few studies have been conducted on the socio demographic aspects and social consequences of alcohol-use among hill-dwellers. A well-planned nationwide program for the prevention and control of this social pathology is needed.

The present study was undertaken with the objectives to identify the patterns of alcohol intake among different types of alcohol consumers and to assess the clinical signs of chronic harmful alcohol-use so that it might be beneficial in planning, implementation, and evaluation of appropriate programs for the elimination of this social evil.

Materials and method

This study was a cross-sectional study, carried out from June 2014 to February 2015 (nine months) at Naniarchor and Langadu Upazila Health Complex of Rangamati district, Chittagong Hill Tracts, Bangladesh. All Subjects coming to upazila health complex at that duration were enrolled in the study as population. Finally 716 subjects were included as sample. In the current study, alcohol consumers were evaluated as those who had consumed at least one standard drink per week.[5]

A questionnaire was prepared with reference to previous studies in the literature to evaluate the subjects' alcohol dependence. The CAGE test developed by Ewing (1984) was used as a screening test for the evaluation of alcohol dependence.[7] The options of the test were in the form of 'Yes' and 'No', and it consisted of four questions. If at least two questions were answered 'Yes', the person was considered "suspicion of alcohol abuse."

Statistical analysis was made using the chi-square test for categorical variables. A value of $p<0.05$ was considered statistically significant. The Statistical Package for Social Sciences, SPSS (version 16.0) for Windows was used to analyze data.

Results

The average age of the participants was 36.64±6.38 years (range 14-65 years). Most of them (65%) were in less than 40 years age group and 47% were unmarried. Only 30% were educated above secondary school level. The majority (69%) had a job, mostly self employed. The frequency of alcohol consumption in our study was found to be 48.9%. The distribution of alcohol consumers and non alcohol consumers by

some socio demographic characteristics is shown in Table I.

Table I: Socio demographic characteristics of alcoholics and non alcoholics (N = 716)

Socio Demographic Characteristics	Alcohol Consumption No Frequency (%)	Alcohol Consumption Yes Frequency (%)	Total (%)	x^2 / p value
Age group				
<40 years	255 (36)	209 (29)	464 (65)	19.177/ 0.0000
>40 years	111 (16)	141 (19)	252 (35)	
Educational level				
Primary school and below	280 (40)	222 (32)	502 (70)	29.988/ 0.000
Secondary school and over	86 (8)	128 (20)	214 (30)	
Marital status				
Married	198 (28)	116 (16)	314 (44)	
Single	111 (15)	223 (31)	334 (47)	9.068/ 0.011
Widower	57 (8)	11 (2)	68 (9)	
Job status				
Employed	263 (37)	229 (32)	492 (69)	9.059/ 0.003
Unemployed	123 (17)	121 (17)	244 (34)	

In our study we found rural people are the most vulnerable group as 228 alcoholic cases were from rural areas (65%). Rest 35% cases were from urban areas. (Fig. 1)

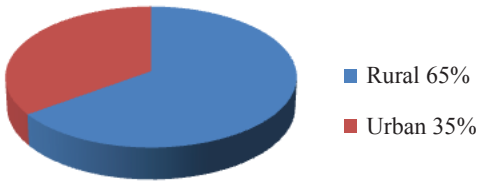

Fig. 1: Area wise distribution of Alcoholic Cases

We also found that there were various types of alcohol ingested here. Of them home made alcohol were the commonest (61%). They use various local ingredients to make a drink. Other types found were the Country liquor (18%), Beer (11%), Ram (4%). Multiple types of drinks were ingested by 2% subject. (Figure 2)

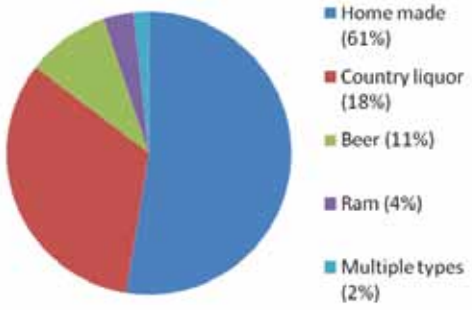

Fig. 2: Types of Alcohol Ingested

We inquired about their starting age of alcohol and found that most of them (82%) started their alcohol at a very young age, 61% started alcohol consumption between the age of 20-30 years (n=214) and 21% started before the age of 20 years. (Fig. 3)

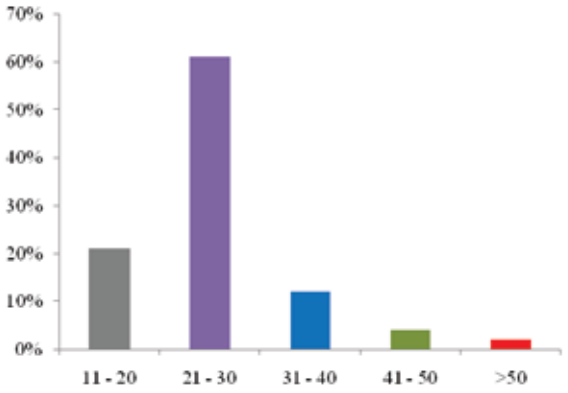

Fig. 3: Age group in which an individual started alcohol ingestion

Our study also reveals the frequency of alcohol consumption. Most of the tribal (48%) takes alcohol daily, 26% takes alcohol thrice a week and 11% takes twice a week. Only 8% takes alcohol occasionally. (Fig. 4)

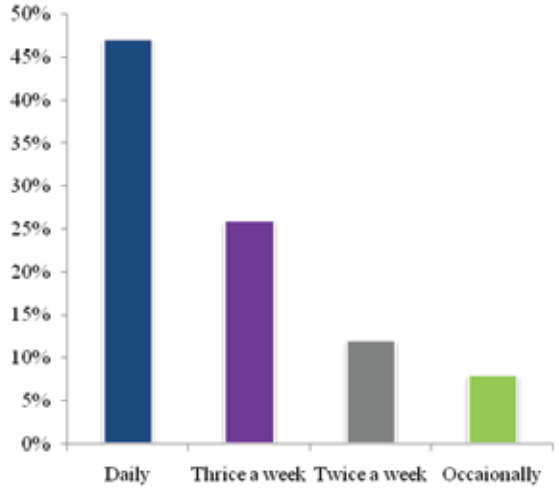

Fig. 4: Frequency of Alcohol ingestion

To drive pleasure was the most common reason for starting and continuing alcohol at present (57%). The other factors found were to reduce stress (34%), to socialize (31%), to forget problems (21%), under influence of people or friends (10%)

and for self confidence (5%). Even some (4%) were found continuing alcohol to enhance work performance. (Fig. 5)

*Allowed to answer multiple reasons.

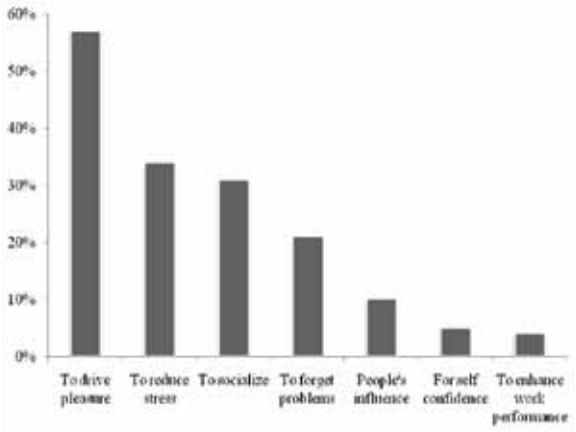

Fig. 5: Reasons for starting and continuing alcohol

We did a self analysis of the cases based on CAGE criteria.[7] Most of the alcoholic tribal felt the need to out down drinking (48%), 111 cases (35%) felt annoyed by the drinking, 48 cases felt guilty, and 38 cases (12%) took a morning drink. (Table II)

Table II: Self analysis of the cases based on 'CAGE' criteria (n = 350)

Self analysis	Frequency	Percentage
Cases that felt the need to out down drinking	153	48
Cases that felt annoyed by the drinking	111	35
Cases that felt guilty about his drinking	48	15
Cases who took a morning drink (Eye opener question)	38	12

Physical and mental examinations were done for all the alcoholic tribal by a consultant and 88 % cases were diagnosed with physical or mental degeneration. We found 37%, 28%, and 10% cases had physical, mental and moral degeneration respectively. (Table III) Delirium tremens (17%) is the commonest sign in mental degeneration followed by Korsakoff's psychosis (6%) and acute hallucination (4%). (Table III A)

Table III: Signs of degeneration due to alcohol (n=350)

Signs of Degeneration	Frequency	Percentage
Physical	131	37
Mental	97	28
Moral	36	10
Others	5	2
More than one type	81	23
Total	350	100

Table III A: Signs of Mental degeneration (n=97)

Signs of Degeneration	Frequency	Percentage
Delirium tremens	61	17
Korsakoff's Psychosis	22	6
Acute Hallucination	14	4

Discussion

The present study found a high prevalence of alcohol consumption (48.9%), consistent with many study results from many countries showing that the figures ranged between 30% and 37%.[1,2] The frequency of alcohol consumption in this study was significantly lower in the age group of 40 and over when compared to other age groups, in line with various studies.[4] This result may be explained as depending on advancing age and increase of diseases, people may have chosen to reduce alcohol consumption. Especially in developing countries as the level of education increases, income also increases. In parallel, the money to spend on alcohol also increases. All these factors may increase social drinking. In this study, the pattern of alcohol consumption among those whose educational levels were primary and secondary school was higher than those whose educational levels were primary school and below ($p<0.05$). There are several studies which reported similar results.[6,8] However, in some studies in developed countries; increasing educational levels have been reported to decrease alcohol use.[3] More studies are needed to clarify this contradiction. Similarly, in this study, the prevalence of alcohol consumption was found to be higher in those with

any job than those without ($p<0.05$). Since being married creates a regular lifestyle and brings responsibilities to one's life, the prevalence of alcohol consumption is expected to be lower in married ones than in those single and widower. The prevalence of alcohol consumption for married persons was significantly lower than those unmarried and those widowers ($p<0.05$). Many studies report similar results.[1,2]

The present study is similar with the WHO report that rural population was more frequently affected.[2] The study is in conflict with the findings of Gupta et al. which showed that country liquor is the preferred drink.[5] The findings of the present study are in contrast with the findings of Benegal et al. which showed that the mean age of starting taking alcohol decreased from 28 years to 20 years.[5] The present study is also in disagreement with another study which showed that the mean age of starting alcohol intake is 29.45 years.[9] Reasons for alcohol use had been widely documented by other studies. The most commonly stated reason reported by Deswal and Jindal was to get pleasure.[4] Reasons reported by Gupta and colleagues included 'relaxation', 'releases their inhibitions' and 'increases their confidence'.[8]

Conclusion

The present study showed that the problem of alcohol is a serious one and is likely to grow in the coming times. The ill effects brought by the alcohol on the health of the person and possible financial implications on the family are a cause of concern. It is important for policy makers to be aware of this pattern of use and reasons for use. There is need to conduct more research along with tribal people particularly among the rural young age groups so that suitable preventive measures can be adopted.

References

1. World Health Organization. Edwards G, Gross MM, Keller M, Moser J, Room R, editors. Alcohol Related Disabilities. Geneva: World Health Organization; 1977. WHO Offset Publication No. 32 [cited 2015 Aug 15]. Available from: http://apps.who.int/iris/bitstream/10665/37127/1/WHO_OFFSET_32_(part1).pdf.
2. World Health Organization. Problems Related to Alcohol Consumption. Geneva: World Health Organization; 1980. WHO Technical Report Series No. 7:650 [cited 2015 Aug 15]. Available from: http://apps.who.int/iris/bitstream/10665/41406/1/WHO_TRS_650.pdf.
3. World Health Organization. Global Status Report: Alcohol Policy. Geneva: Department of Mental Health and Substance Abuse, World Health Organization; 2004 [cited 2015 Aug 15]. Available from:http://www.who.int/substance_abuse/publications/en/Alcohol%20Policy%20Report.pdf.
4. Deswal BS, Jindal AK, Gupta KK. Epidemiology of Alcohol Use among Residents of Remote Hills of Arunachal Pradesh. Indian J Community Med. 2008;33:88-89.
5. Benegal V. Alcohol and Public Health. Addiction. 2005;100:1051-56.
6. Davinder M, Chopra A, Ray R, Sethi H. Alcohol Consumption in India: A Cross-Sectional Study. India.103-14.
7. Ewing JA. Detecting Alcoholism: The CAGE Questionaire. JAMA. 1984;252:1905-907.
8. Gupta PC, Saxena S, Pednekar MS, Maulik PK. Alcohol Consumption among Middle-Aged and Elderly Men: A Community Study from Western India. Alcohol and Alcoholism. 2003;38(4):327-31.
9. Haider W, Chaudhary MA. Prevalence of Alcoholism in the Punjab, Pakistan. Biomedica. 2008;24:80-84.