A Cross-sectional Study on Binge Drinking among Health Institutional Students in Bagalkot

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Abstract

Background: Alcohol consumption is a major public health problem worldwide. In 2012, about 3.3 million deaths were attributed to alcohol consumption. DALY attributed to alcohol consumption is 139 million. Adolescence is the critical period when the first initiation of alcohol intake takes place. Sixteen percent of drinkers of age more than 15 yrs engage in heavy episodic drinking. Due to change in lifestyle a considerable number of social drinking have shifted to binge drinking. Objectives: To know the prevalence of binge drinking among health institution students in Bagalkot. Material and Methods: A cross sectional study was conducted among 380 health institution students. Five different cadre of health institutions were taken, one medical, one dental, one Ayurveda, one nursing and one Pharmacy College. A pre designed, semi structured questionnaires were used. The results were analysed by chi square test. Results: Among total 380 participants, 68% were girls and 32% were boys. Majority of the respondents were staying away from home (83%). More than one fifth (20.53%) of respondents had tasted alcohol at least once, of which more than one third (37.18%) were female. Prevalence of binge drinking was 3.16%. Among binge drinkers, 58.33% had at least one of their family members who consumed alcohol. Conclusion: Existence of risk behaviour like binge drinking among students were seen and it demands integrated approach. Increased awareness among parents and also the respondents is needed to prevent adolescent behaviours from becoming a risk to their health and community.

INTRODUCTION

Adolescence is a vulnerable period, where they tend to learn new things and initiate new habits sometimes it may be high risk behaviours like alcohol consumption or smoking. These high risk behaviours contribute to leading causes of mortality and morbidity often get extended into adulthood. Alcohol remains one of the widely used drugs among the college students. According to WHO, Worldwide annual consumption of alcohol in 2010 was 6.2 litres of pure alcohol per person aged 15 yrs or old. Among them 16% engross in heavy episodic drinking. In India the average annual per capita consumption of alcohol is 22.25 litres of pure alcohol (age 15 yrs or more). Due to westernization and the influence of social media, alcohol consumption has become a social custom.

The common abuse pattern of alcohol is binge drinking. Which underwrites to a bounteous amount of alcohol related death in western countries. Consuming a large amount of alcohol in a single setting may lead to both acute (eg: impaired driving, alcohol poisoning, etc) and chronic risks (eg: alcohol addiction, liver damage, etc). As binge drinking is a serious public health problem in western nations but its magnitude in Indian circumstance is not known. This study concentrates on binge drinking among students of health institutions.

Binge Drinking

Binge drinking is defined as “A pattern of drinking alcohol that brings blood alcohol concentration (BAC) to 0.08 gram percentage or above. For a the typical adult, this pattern corresponds to consuming five or more drinks in males and four or more drinks in females in about 2hrs”. In the above definition a drink refers to a “Standard drink” which is half an ounce of pure alcohol. When putting it into different available drinks like beer, whisky, brandy, vodka or wine, depends upon the percentage of alcohol content in different types of drink the amount varies to attain the standard drink (Table-1).

Objective

To know the prevalence of binge drinking among students belong to different health institutions in Bagalkot.

MATERIALS AND METHODS

Study Population

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All undergraduate students and interns of health institutions in Bagalkot city were considered for the study. Five health institutions were taken on 1 Medical college, One Dental college, One Ayurvedha college, One Nursing college, One Pharmacy college.

**Study Design & Study Duration**

Cross sectional study was done from March 1st 2014 to May 31st 2014.

**Sample Size**

As no study has been done on binge drinking among college students in India. Prevalence of alcohol use among college students were taken into consideration for calculating sample size. Based on previous study done by Khosla et al, taking p as 31.9 and q as 68.1 and allowable error of 15% using the formula $4pq/l^2$ the sample size was 380 students.

**Study Tool**

After obtaining institutional ethical committee approval and after obtaining informed consent a pre designed, semi structured questionnaires were used. Questionnaires were validated and sufficient alterations were done after a pilot study done among Dental college students from March 1st 2014 to March 31st 2014. Students were randomly selected from each college based upon population proportion to size.

For practical purpose we have used CDC chronic disease indicator definition for binge drinking which has an addition of duration limit along with the original definition. In this study binge drinking is defined as “Student who reports >=5 drinks in boys and >=4 drinks in girls within a couple of hours on >=1 day during the past 30days”. This additional time limit was included to demarcate binge drinkers from social or occasional drinkers.

**Statistical analysis**

Data were documented and tabulated using Microsoft excel 2010. Analysis was done using EpilInfo 7. Chi square test were used to find the significance.

**RESULTS**

A total of 380 students were reckoned into the study. Majority of the study participants (72.64 %) were between 19-21yrs old. Among them 68% were girls and 32% were boys. Majority of the respondents were staying away from home (83%). 56% of the study participants were from rural area.

**Alcohol Use**

More than one fifth (20.53%) of respondents had tasted alcohol at least once, of which more than one third (37.18%) were female. The prevalence of binge drinking among health institution student’s was 3.16% (Males = 2.63% and Females = 0.53%). Majority of binge drinkers belonged to high socioeconomic status i.e., Class I&II (33.33% each) and with urban background (66.67%). Their favourite drinks were beer and whisky (33.33% each) followed by brandy and vodka. As majority of binge drinkers were staying away from home (75%). Student staying away from home for study purpose, who are not under direct parental monitoring favours them. Family history of alcohol consumption plays an important role as among binge drinkers 58.33% had at least one of the family member consumes alcohol, which was highly significant.
(<0.001) Family members drinking in the presence of the students and drinking alcohol at home had a deleterious effect as more than three fifth (41.67%) of binge drinkers had an experience of family member drinking before them and one fourth (25%) had a family member who drinks in his/her home, both were highly significant (<0.001) (Table 2).

**Effect of Binge drinking**

Majority of binge drinkers smoked cigarette (83.33%). All smokers accepted that the number of cigarettes smoked increased, while they consumed alcohol, which has a double damaging effect the harmful effect of both alcohol and smoking including passive smoking upshot to other non-smoking friends. The increase in number of cigarettes per sitting was categorised into less than 5, 5-10 and more than 10 cigarettes, which were 30%, 30% and 40% respectively. Three fourth (75%) of the binge drinkers accept that they used to drive either two or wheeler even after drinking alcohol. In which 33.33% had confessed they met with a road traffic accident due to it. About one fourth (25%) skipped their next day morning class if they were drunk the previous night. Among them 41.67% accepted their academic grades were decreasing (Figure 1). More than half 58.33% of them divulged that they spent around Rs1000-2999 per month for buying alcohol. Among which everyone depends on their parents for their pocket money. One fourth of them 25% tried to quit drinking alcohol but none of them seeked medical consultation and all have reverted back to drinking alcohol within one month.

**DISCUSSION**
Generally India is considered as a traditionally dry or abstaining culture\textsuperscript{11}. Due to change in social situation, globalization, urbanization and migration there is a change in paradigms of alcohol use. In the past two decades there is an upward trend in the prevalence of alcohol use and there is growing evidence that there is change in pattern of alcohol consumption. A considerable number of social or occasional drinkers are converting into binge drinkers\textsuperscript{12}. Our purpose of the study was to find the magnitude of binge drinking.

The prevalence of binge drinking among college students were low in this study (3.16\%) when compared to studies done in western country i.e., United States of America and in other Indian studies where the study subjects were different. In a study done by Patrick ME\textsuperscript{13} the prevalence of binge drinking was 20.2\%. In a study done by May PA\textsuperscript{14} among American Indians revealed that about 70.7\% of males and 60.4\% of females has drunk alcohol at least once in 12 months. When compared to Indian studies done by Girish N\textsuperscript{15} among general public revealed that the prevalence of binge drinking was 2.21\% and study done by Mohanan P\textsuperscript{16} among urban adolescents in Udupi was 5.7\%. This gross variation between western country and India may be due to cultural difference which seems to be changing. Compared to males the prevalence of binge drinking among females were less. Surprisingly the prevalence of binge drinking among females in this study (16.67\%) almost nearer to study in USA by National Youth Risk Behaviour Survey (YRBS) 19.8\%\textsuperscript{17}. This data is also confirmed by WHO’s global report of alcohol and health were the number of female heavy episodic drinkers were increasing through years and recent data is 14.6\%\textsuperscript{4}.

The detrimental effect of alcohol consumption is well known. But in addition to direct, indirect effects are also prevails it like smoking, other drug use, drunken drive, etc. In this study 83.33\% of binge drinkers smoked cigarette which is high when compare to 32.8\% in study done on American Indians by May PA\textsuperscript{14}, 27.4\% in a study done in Assam by Medhi GK\textsuperscript{18}. In this study 75\% of binge drinkers accepted they used to drive even after getting drunk which is also high when compared to 62\% in study done by May PA\textsuperscript{14} and 16\% in study done by Khosla\textsuperscript{10}. About one third (33.33\%) confessed that they met with an accident following drunken drive which is also high when compared to 8\% in study done by Khosla\textsuperscript{10}, which clearly is going to endangers them self and others too.

Unlike Western nations in India majority of adolescents are still dependent on their parents for education and for their daily expenses. Yet 58.33\% spend more than Rs.1000 on alcohol. which is also supported by the study done by Khosla\textsuperscript{10}, stated that “who had access to pocket money were four times more likely to use alcohol compared to their counterpart”.

LIMITATION

One of the major limitation of the study is self-reporting, the chances of memory/recall bias and masking of data is always there. We have tried to minimize it by making it as anonymous. Second is timing of the study (March to May) as it was the time of exam, the actual frequency of alcohol consumption may be less as the students may be concentrating more on academics performance. But taking into account the basic addictive nature of alcohol, it shall not have significant effect. Third no investigations was done, so the exact amount of physical morbidity occurred among students is not known. Further interventional studies are needed to know the exact amount of impact it has made.

CONCLUSION

Changing socio cultural factors, media and urbanization has made alcohol consumption a social custom. But there is a startling increase in binge drinkers among adolescents. When compared to western countries it may be on the lower side but it is increasing day by day. This pattern of alcohol consumption will not only affects this generation but also next generation too, as presence of alcoholic in the family influences the younger person in the family too. Influence of family member being an alcoholic, consuming alcohol in home or in their presence, moving out of home for education purpose all favours them to start this precarious habit. An integrated approach from all the sides from adolescents themselves, parents, friends and government is needed to halt this perilous habit of binge drinking.

REFERENCES


