RESEARCH ARTICLE

A CROSS-SECTIONAL STUDY: PREVALENCE OF ALCOHOL CONSUMPTION, FACTORS ASSOCIATED AND IT'S EFFECTS AMONG UNDERGRADUATE COLLEGE STUDENTS

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ABSTRACT

Background: Alcoholism is gradually tearing down the college students worldwide. This is turning out to be a major social predicament. Alcohol misuse was reported as a strong predictor of students' mental health. **Objectives:** To assess the prevalence of alcohol consumption, factors associated with it and its effects among undergraduate students. **Methods:** Cross-Sectional Survey was applied on 180 undergraduates at Shekhawati PG college, Rajasthan, India, using Stratified random sampling. Structured questionnaire and rating scale were used to collect the data. **Result:** The finding showed 25.55% prevalence of alcohol consumption with majority of being males (63.04%). Maximum number (47.8 %) of the students started alcohol consumption at18-19 years of age with reasons being: social gathering or marriage party (69.56%), peer pressure and curiosity about the effects of alcohol (13.04%), drinking habit of the parents (6.52%). Majority of the student (65.21%) drink outside the home and at night time (91.30%). Maximum urge (86.95%) was felt for pleasure (93.47 %) on special occasion or party function. Early onset of consumption made students (28.26%) addicted. Maximum students (78.3%) showed mild whereas 21.7% experienced moderate effect of alcohol consumption. **Conclusion:** The study showed that most common age to start consuming alcohol was between 18-19 years and common reasons to start included 'social activities' and 'peer pressure' for majority and for a few 'curiosity' and 'family influence'. It becomes incumbent on the government, healthcare practitioners and other stakeholders to promote responsible drinking and discourage premature drinking.

INTRODUCTION

Globally, alcohol consumption is a significant public health concern. It is one of the most important risk behaviors among young adults, including university students. Currently, 26.5% of the global population between the ages of 15 and 19 consumes alcohol. In Europe, the prevalence of alcohol consumption among university students was 46.2% (males) and 28.1% (females) in Bulgaria, 41.1% (males) and18.1% (females) in Germany, and 20.1% (males) and 10% (females) in Poland, respectively. In Japan, approximately 56.8% and 47.8% of male and female university students were binge drinkers. [i] The Hindustan Times reported that 5% of Indians can be classified as alcoholics which projects that at least 5 million people are addicted to alcohol. Studies conducted by the De-addiction Centre at the All India Institute of Medical Sciences (AIIMS) showed that every 5th teenager between 15-19 age groups takes alcohol. 300,000 are addicted and another one lakh need medical attention for alcohol related disorders. [ii]

Problems related Alcohol consumption have risen substantially in many Asian countries including India over the last several years. Alcohol related disorders are increasingly being reported in India. A significant lowering of age at initiation of drinking was found in Karnataka which also showed a drop from a mean age of 28 years to 20 years between the birth cohorts of 1920-30 and 1980-90. He asserted that alcohol consumption had visibly increased in the nontraditional segments of urban women and young people, with a noticeable upward shift in rates of drinking among urban middle and upper socio-economic sections. [iii] The greater concern is the consumption of alcohol by adolescents and youth. Of the whole Brazilian population in the age group 12-17years, 48.3% claims to consume alcoholic beverages and 5.2% are alcoholic. This age group entering the university acquires social mobility from specific rules where behaviors are built from the process of social comparison. Thus, the teenager tends to model his actions searching similarities with the reference group, in this case, university students, who over estimate alcohol consumption.

Social remodeling intensifies when the individual is presented with little experience in a new place, which occurs on entry to the university.[iv] People have excuses to start the alcohol consumption. One-third of the user began drinking before 20 years of age with strained relations with their family members and neighbors both. Many people complain for reason behind alcohol consumption is stress. India is a developing country, peoples have different type of stress e.g. family stress, occupational, and job related stress. In this condition when person cannot deal with stress and want to suppress the stress, start alcohol consumption.[v] Consumption of alcohol among college students is a worldwide problem. Alcoholism is gradually tearing down the college students. Alcoholism has taken their toll on the college student, and this is turning out to be a major social predicament in the state. The majority of the students start taking alcohol simply for enjoyment. However, their consumption may be started because of class differences. Unemployment, poverty, frustration, etc. are also some of the main reasons for taking drugs and alcohol during youth since they feel that it can ward off tensions and worries. The problem with college drinking is not necessarily the drinking itself, but the negative consequences that result from excessive drinking, which leads to college dropouts, death, injury, health problems, suicide attempts etc. Many students are trapped into consumption of alcohol and spoilt their life which affects their career.[vi]

Alcohol consumption in college life is identified due to some risk factors including age, gender, social environment, stress, emotional health, genetic predisposition, urbanization, westernization, curiosity and peer pressure. It is a major life threatening problem affecting the individual college student, his family and society in numerous adverse ways. Alcohol consumption in the college life results poor academic consequences, alcohol-related health problems, unprotected sexual problems, violence, property damage, public drunkenness or driving, suicides and motor vehicle crashes. It is a distressing thing when the college students indulge in alcohol behavior.[vii] "All the children and adolescents have the right to grow up in an environment protected from the negative consequences of alcohol consumption and to the extent possible, from the promotion of alcoholic beverages"
-World Health Organization's European Charter on Alcohol.[viii]
Article 47 of the Indian constitution directive principles of state policy states, "The state shall endeavor to bring about prohibition of the consumption except for medicinal purposes of intoxicating drinks and of drugs which are injurious to health."[x]

Alcohol is the third leading preventable risk factor for the global burden of disease and responsible for 3.3 million deaths (5.9% of all global deaths). In 2012, World Health Organization reported that 7.6 and 4% of deaths were attributable to alcohol among males and females, respectively. Alcohol contributes to over 200 diseases and injury-related health conditions, mostly alcohol dependence, liver cirrhosis, cancers, and injuries. Alcohol consumption is the fifth leading risk factor of premature death globally; among people between the ages of 15 and 49 years, it is the first leading cause. Alcohol consumption was also reported as a strong predictor of students' mental health in which, it was attributable for increased depressive symptoms accompanied with drinking to cope, attempted suicide and self-harm behaviors and aggressive behaviors.[x] The literature suggests that alcohol consumption among college students is prevalent across the globe. To identify the prevalence among undergraduate students, this study was planned to assess the prevalence of alcohol consumption, factors associated with it and its effects among undergraduate college students of selected college in Sikar district of Rajasthan, india"

METHODS AND METERIALS

A descriptive cross sectional survey applied to 180 undergraduate students of one non-governmental, non-professional, Shekhawati P.G. College, Kanwat, district Sikar of state Rajasthan, India, to assess the prevalence of alcohol consumption, factors associated with it and its effects among undergraduate college students. Stratified random sampling was used to collect the data. Structured questionnaire and rating scale was developed to assess the prevalence of alcohol consumption, factors associated with it and its effects. The tool consisted of four sections.

SECTION- I included socio demographic data like age, sex, stream of study, year of study, type of family, educational status of parents, occupation of parents, and income of family, living arrangement, domicile, and order of sibling in the family.

SECTION- II consisted of 13 items which ascertain information regarding alcohol consumption and drinking pattern of undergraduate college students.

SECTION – III consisted of four main questions with multiple responses to determine the factors associated with alcohol consumption among undergraduate college students.

SECTION - IV was a three point rating scale to determine the effect of alcohol consumption. It consisted of 20 statements. The three point scale consisted of responses as never, rare, often with scores 1, 2, and 3 respectively. The maximum score was 60. The effect of alcohol consumption have been categorized into three category- mild (20-30), moderate (31-45) and severe (46-60). The tool was developed after reviewed related literature, discussions with the experts in the field and related field, collection of information from various source and informal talk with undergraduate students.

To ensure the content validity of the tool structured knowledge questionnaire was given to 9 experts. To establish reliability of structured questionnaire, it was administered to 10 undergraduate students of Krishna College, Kanwat, Sikar district (Rajasthan). The tool was found reliable with computed Crohnbach-alpha 0.84. The average time taken by each individual for completion of knowledge questionnaire was around 30 minutes.

Ethical consideration: Administrative approval was taken from the principal of Shekhawati P.G. College, Kanwat, district Sikar of Rajasthan state. Written informed consent was obtained from the participants of the study. Purpose of the study was explained to the participants and confidentiality of their responses was assured. Anonymity was maintained throughout the study. The study was conducted from 15th October to 27th October 2019. Participants were administered a structured questionnaires on prevention and control of alcohol of alcohol consumption. It took them around 30 minutes to

complete the questionnaire. The data obtained were organized, tabulated, analyzed using IBM SPSS version 26.

RESULTS

Table 1. Shows that maximum number (47.8 %) of students were of 18-19 years. Male and female participated equal in number (N=180). Majority of students (52.2 %) belongs to nuclear family. Majority of the mothers (53.3 %) were illiterate.

Table 1. Frequency and percentage distribution of sample characteristics N=180

Variables	Description	Frequency	Percentage (%)
Age(in years)	16-17	53	29.4
	18-19	86	47.8
	20-21	41	22.8
Sex	Male	90	50
	female	90	50
Stream of study	Science	60	33.3
	Arts	60	33.3
	Commerce	60	33.3
Year of study	First year	60	33.3
	Second year	60	33.3
	Third year	60	33.3
Type of family	Joint	86	47.8
	nuclear	94	52.2
Father's Education	Illiterate	27	15
	Secondary	48	26.7
	Higher secondary	34	18.9
	Graduation	41	22.8
	Post-graduation & above	30	16.7
Mother's Education	Illiterate	96	53.3
	Secondary	67	37.2
	Higher secondary	10	5.6
	Graduation	4	2.2
	Post- graduation & above	3	1.7
Father's Occupation	Government job	39	21.7
	Private job	47	26.1
	Agriculture	61	33.9
	Businessman	21	11.7
	Contractual job	12	6.7
Mother's Occupation	Government job	3	1.7
	Private job	17	9.4
	Agriculture	62	34.4
	Homemaker	97	53.9
	Businessman	0	0
	Contractual job	1	0.6`
Monthly family income (INR)	Below10000	37	20.6
	10001-20000	42	23.3
	20001-30000	41	22.8
	Above30000	60	33.3
Stay of Day–scholar	With parents	80	44.4
	With friends	24	13.3
Living arrangement of Hosteller	Alone	10	5.6
	With room mate	42	23.3
	Alone	24	13.4
Area of living	Rural	140	77.8
	Urban	40	22.8
In your family, what is Your order in siblings?	First	56	31.1
	Second	68	37.8
	Third	41	22.8
	Fourth	15	8.4

Mothers (37.2%) had secondary level education whereas only 1.7% was post-graduate. Maximum numbers of fathers (33.9%) were farmers. Majority (54.5%) of the mothers were home maker and 34.4% were in agriculture activities.

Families of 33.6% students had income above rupees 30,000 per month. Majority of students (63.33%) were day scholar whereas 36.66% were hosteller. Maximum of the day scholar (44.4%) were living with their parents. Majority (77.8%) of students were residing in rural area. Table 2. Shows that alcohol prevalence was found 25.55% among undergraduate students out of that 63.04% were Male while 36.96% were female.

Table 2. Frequency percentage distribution according to consumption of alcohol.N=180

Consumption of alcohol	Frequency	Percentage (%)
Yes.	46 (29male,17male)	25.55 (63.04% male,36.96male)
No	134	74.44

Table 3. Shows that Majority of students (65.23%) were of 16-18 years when they started consumption of alcohol whereas 10.87% were of 19-21. Majority (65.23%) had beer while 21.7% had rum as first drink with their friends (60.9%), 30.4% with family members and 8.7% with relatives.

Table 3. Frequency and percentage distribution according to their drinking pattern of the students, who use alcohol N=46

Drinking pattern		Frequency	Percentage (%)
At what age did you start consuming alcohol?	Below15 years of age	11	23.90
	16-18 years of age	30	65.23
	19-21years of age	5	10.87
What was the first drink?	Beer	30	65.23
	Wine	4	8.7
	Whisky	2	4.4
	Rum	10	21.7
With whom did you drink for the first time?	Friends	28	60.9
	Family members	14	30.4
	Relatives	4	8.7
Forms of alcohol used.	Wine	2	4.3
	Beer	40	86.9
	Brandy	1	2.1
	Whisky	1	2.1
	Rum	2	4.3
	Vodka	0	0
How often do you drinks?	Daily	0	0
	3-5 times in a week	0	0
	Once a week	9	19.56
	Only once in a month	5	10.86
	On special occasions	32	69.56
How many pegs do you have at a time?(1peg=30ml)	1-2 peg	24	52.17
	3-4 peg	20	43.47
	5-6 peg	1	2.17
	7-8 pegs	1	2.17
	More than 8 pegs.	0	0
In a month, how many times did you have 5 or more pegs at a sitting?	Never	35	76.08
	1-2	10	21.73
	3-4	0	
	5-6	1	2.17
Are you always able to stop drinking when you want to?	Yes	33	71.73
	No	13	28.26
Place of drinking.	Home	6	13.04
	Outside	30	65.21
	Both	10	21.73
Drinking time.	Day time.	2	4.34
	Night time	42	91.30
	Both.	2	4.34
Who does drink in the family?	Father	27	58.69
	Mother	2	4.34
	Brother	12	26.08
	Sister	1	2.17
	Any other	16	34.78
Who does pay for drink?	Self	4	8.69
	Other	16	34.78
	Sometimes self, sometimes others	26	56.52

Majority of students (69.56%) consumed occasionally, 19.56% once a week and 1 0.86% once in a month. Majority of the students (52.17%) drink 1-2 pegs at a time.

Majority of students (76.08%) never drank 5 or more times in a month, whereas 2.17% drank 5-6 times in a month. Majority of the students (71.73%) were always able to stop drinking when they wanted, while 28.26% were not. Majority of the student (65.21%) used to drink outside the home, 13.04% drink at home and 21.73% drink at both places. Majority of the students (91.30%) drink in night time. Majority of the Fathers (58.69%) whereas 26.08% brothers, 4.34% mothers, and 2.17% sisters used to drink. On majority of the occasions (56.52%) sometimes self and sometimes others whereas 34.78 % of the occasion others paid for the drinks.

Table 4. Shows that Majority of students (69.56%) consume in social gathering or marriage party, 13.04% influenced by peer pressure and curiosity about alcohol effect whereas 6.52% of them influenced by their parents. Among the students, 4.34% consume alcohol due to easy availability, 4.34% drink to become happy whereas 2.17% influenced by famous person or their role-model. Majority (86.95%) of the students had urge for alcohol consumption on Special occasion/party function, 13.04 % had urge when they see somebody drinking, 2.1% when feel depressed while no one drink on weekend. Majority of students (93.47%) drink for pleasure and 6.53% when they get depressed.

DISCUSSION

In the discussion of the study we found that Alcohol prevalence was 25.55% among undergraduate students out of that 63.04% were Male while 36.96% were female. The findings of the study are consistence with the findings of Global status report on alcohol and health (2018) which revealed that alcohol consumption in young people by comparing prevalence rates of abstainers and current drinkers among the population 15–19 years of age with those in the total population, it was noted that prevalence rates of current drinking was highest in the WHO European Region (43.8%), followed by the region of the Americas (38.2%) and the Western pacific region (37.9%). Accordingly, these rates are lowest (1.2%) in the Eastern Mediterranean Region. Worldwide, more than quarters (26.5%) of all 15–19-year-olds are current drinkers, amounting to 155 million adolescents.[xi] Similarly Hein Htetet. al. (2019) found that Southeast Asia, the prevalence of harmful alcohol consumption among university students was 24.4% in Laos, 10.8% in Thailand, 1.4% in Myanmar, and 0.7% in Indonesia. The World Health Organization (WHO) recently reported that the prevalence of heavy episodic drinking among those between the ages of 15 and 19 is higher among males (47.2%) than among females (16.1%) in Myanmar. [1] Similarly Nidhi Goel et al. (2015) in astudy on alcohol and tobacco use among undergraduate and postgraduate medical students in India, found the prevalence of alcohol and tobacco consumption among U.G. students was 16.6%and 8.0%, respectively. For both substances, males had a higher prevalence of alcohol consumption compared to females in both groups.[xii] Consumption of alcohol and other substance has become a global problem. Similar findings were found in a study by Gezahegn Tesfaye, Andualem Dereseetal (2013) with 15183 undergraduate regular students in Haramaya University. Study indicates that substance use among Ethiopi an adolescents was considerably rising; in particular college and university students were the most at risk of substance use. The aim of the study was to assess substance use and associated factors among university students.

A cross-sectional survey was carried out using self-administereds tructured questionnaire. About two-thirds (62.4%) of the participants used at least one substance. The most commonly used substance was alcohol (50.2%). Beingmale had strong association with substance use. These findings are similar to the present study. Study revealed the consumption of alcohol at smaller age (among 18-19 years) in both male and female is an alarming situation. [xiii] Use of alcohol in the younger generation is an alarming situation. Present study found that Maximum number (47.8 %) of the students started alcohol consumption at early age were between 18-19 years. Similarly Halari M, Alao OJ, et al (2016) reported that alcohol consumption began at <10 years (6.25%),11-15years (6.25%),16-20 years (81.25%) and21-30 years (6.25%). The 13 females reported they be gantoconsume alcohol at <10years (10.71%), 11-15years (7.14%), 16-20 years (60.71%), 21-30 years (21.43%). [xiv] Similarly the research showed that many adolescents start to drink at very young ages. In 2003, the average age of first use of alcohol was about 14, compared to about 17 1/2 in 1965 (7,8). People who reported starting to drink before the age of 15 were four times more likely to also report meeting the criteria for alcohol dependence at some point in their lives [xv] Use of alcohol at early age, make the students vulnerable to become addict. It was found in the present study that maximum (28.26%) students were not able to stop alcohol consumption, which is sign of alcohol addiction. These findings are consistent with Ralph W. et al., where they reported that those who began drinking before age 14 years were more likely to experience alcohol dependence ever and within 10 years of first drinking. They also more often experienced past-year dependence and multiple dependence episodes.[xvi]

Many factors are found influencing the alcoholic behavior of the students in younger age groups. These factors include, easy availability (4.34%) of alcohol around the institution, in the party and social occasion or in marriage ceremony. The students consume alcohol for pleasure. Present study showed parents drinking habits influenced the students (6.52%) to start alcohol consumption at early age. Majority of the students (69.56%) used alcohol on the occasion of social gathering or marriage party. Majority (86.95%) of the students had urged for alcohol on Special occasion or party function. Almost all the students (93.47%) drink for pleasure. Similar findings were reported by Srinivas Medavarapu et al. (2016). Where they determined the common reasons and influencing factors to start alcohol consumption in younger age groups in Dominica. The study showed that most common age to start consuming alcohol was between 16-20years and common reasons to start included' social activities' and 'peer pressure' for majority and for a few 'curiosity' and 'adult influence'.[xvii] Similarly a study was conducted to investigate factors affecting alcohol consumption among 1,200 Bangkok, Thailand university students found that alcohol consumption was not only affected by the individual level factor, but it was also affected by multi-level environmental factors, including inter-personal level, institutional level, community level and societal level factors. [xviii] Alcohol, on consumption, induces several ill effects with variable severity in the body. The present study showed maximum number of the students (78.3%) had mild effect of alcohol whereas 21.7% students experience moderate effect of alcohol. Various systemic ill effect of alcohol reported in the

Report: National Institute of Alcohol Abuse and Alcoholism (2015).

Table 4. Frequency percentage distribution of factors associated with alcohol consumption among students N=46

Particulars		Frequency	Percentage
Reason for alcohol consumption	Curiosity and Peer pressure	6	13.04
	Parental /family drinking	3	6.52
	Easy availability	02	4.34
	Overcome anxiety/stress	00	0
	To cope with loss of a friend /family member	00	0
	Influenced by famous person/ role-model	01	2.17
	Influenced by advertisements	00	0
	Social gathering/ marriage party.	32	69.56
	Quarrels in between parents.	0	0
	Wants to be happy.	02	4.34
Feel maximum urge to drink?	When you see or hear an advertisement for alcohol.	00	0
	When you see some-one drinking.	5	10.86
	Special occasion/ party function	40	86.95
	On weekends.	0	0.0
	When you feel depressed	01	2.1
Drink mostly?	When you feel stressed.	0	0
	When you get depression.	03	6.53
	When you are overburdened with work.	0	0
	For pleasure	43	93.47
Consumption of alcohol in the family	Never	17	36.96
	Rarely	04	8.69
	Sometimes	11	23.92
	Very often	14	30.43

Table 5. Effect of alcohol on the students N=46

Effect of alcohol	Scores	Frequency	Percentage (%)
Mild	20-30	36	78.3
Moderate	31-45	10	21.7
Severe	46-60	00	0

It suggested that early alcohol consumption may have detrimental effects on the developing brain, perhaps leading to problems with cognition later in life. [xix] Similarly, it was reported that as an individual becomes more dependent on alcohol, the functional reserve and regenerative capacity of the GIT are overwhelmed and malnutrition increases.[xx] Similarly the study summarizd the clinically relevant effects of acute and chronic alcohol consumption on motility, mucosal inflammation and cancer of the esophagus and the stomach.[xxi] This is evident that consumption of alcohol leads to nowhere except harmful effect of the health, wasting of money, damage to career and intellectual under development. It is incumbent on the family, society, government, healthcare practitioners and others take holders to promote responsible drinking and discourage premature drinking. Age is a predictor of alcohol consumption. Consumption of alcohol should be stopped at Special occasion/party function as Students should be engaged in other extracurricular, constructive and pleasurable activities they have interests as

CONCLUSION

The study showed that most common age to start consuming alcohol was between 18-19 years and common reasons to start included 'social activities' and 'peer pressure' for majority and for a few 'curiosity' and 'family influence'. It becomes incumbent on the government, healthcare practitioners and other stakeholders to promote responsible drinking and discourage premature drinking. In conclusion, applying regression analysis, age is a predictor of alcohol consumption. Provision for Periodical screening, health guidance and counseling in the educational institutions will help in identifying potential problems related to alcohol use and preventing its aftereffects.

LIMITATION

The present study had small sample size of 180 and single setting during a short span, thus posing restriction to make a broader generalization. A similar study with larger sample and different setting is recommended. A similar study can be done in the area of drug abuse and in various other groups such as school students, office workers, teachers, and other professional group.

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