

## Original Research Paper

# A Study on Alcohol Abuse among Medical Students in A Semi Urban Area of West Bengal

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### Abstract

Alcohol consumption has been recognized as one of the prevalent methods of stress-reduction among national and international medical students. The present study is a questionnaire based cross sectional mono-centric one, conducted in 3 batches of medical students of a semi urban teaching institute of West Bengal. The purpose of this study is to find out the prevalence of alcohol abuse including underlying cause of alcohol intake among medical students & its consequences. Data are analyzed by In Stat Graph pad 3.4 version. P values < 0.05 are considered as significant. This study reveals out of total 244 participants, 87 (35.66%) students consumed alcohol at least once in a life time with a male preponderance. Strong relationships exist between alcohol abuse and stress and depression in the students. Family history of alcohol consumption & living in hostel are two other factors accountable for alcohol use. Most of the alcohol users are just occasional drinker. In most cases, there is no deterioration of academic performances or relationship with parents or no adverse behavioral changes. Findings of this study will be of potential interest since today's medical students will become tomorrow's health promoters.

**Key Words:** Alcoholism, Medical students, Stress, Academic performance

### Introduction:

Alcohol is one of the most common substances used for recreation and relief of stress in life among the youth in India. Besides contributing to relaxation and conviviality, alcohol is also associated with dependence, aggressive behaviour, violence, mental and physical illness. Alcohol effects on perceptions, motor skills, emotions, cognitions and psychological, behavioural aspects.

Changing social norms, urbanization, increased availability and marketing and poor level of awareness related to alcohol have contributed to increase abuse of alcohol among the young people. [1] Although a small proportion of drinkers experience direct adverse effects, studies have shown that an increase in per capita consumption of alcohol is positively correlated with an increase in alcohol related health and social problems. [2]

Medical students are not exempted from this evil effect of substance abuse. Medical students are the cream students of the society and considered to be highly motivated and successful. Alcoholism will affect their academic and professional carrier.

Medical profession is one of the most delicate and responsible job as it deals with healthcare of the society. Alcohol abuse among medical students will decrease the quality of health service in the community.

Alcoholism is more common in medical students of urban setup, where lifestyle, availability of alcohol is easy. But it is also relevant in students of semi urban setup.

Due to lack of entertainment and recreation, study pressure and depression, students of semi urban colleges are more prone to alcohol addiction. This aspect was not studied much till date. The study is focused on to determine incidence of alcohol use among the medical students of this medical college in a semi urban set up and to identify various determinants of consumption of alcohol so that strategies might be formulated to incarcerate the alcohol intake among the would be doctors.

### Material and Method: [3, 4]

This is a prospective cross-sectional study and study design is randomized single blind control study. The study is done among the MBBS students of three batches of a medical

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college in semi urban area of West Bengal in August-September 2013. Sample size is 244.

Students who have given consent to this study are included as subjects and who give biased answer is excluded from the study.

After getting clearance from the institutional ethics committee, data collection is initiated. Pretested & pre validated questionnaire have been distributed among the students after brief introduction about the work.

Data are collected from all the students of three batches who have given the consent to answer those questions. It is single blind procedure; no identification is recorded to reduce bias. Questionnaire is structured in such a manner, so that biased answers can be eliminated. After screening data are analysed by percentage & tests of significance using statistical software In Stat Graph pad version 3.4. After analysis data are presented by tables.

### **Observations & Results:**

Out of total 244 participants, 87 (35.66%) students consumed alcohol which ranges from the students who have taken alcohol once to frequent users/abusers. 157 (64.34%) participants have never tasted alcohol in life till this study period.

In this study out of total 145 males, 61(42%) are alcohol users, whereas out of 99 females only 26(26%) are alcohol users. P value is 0.017 (Chi square value 5.736, degree of freedom 1) which is statistically significant. But there is no statistically significant difference of male and female participants with alcohol intake in year wise manner. (Table 1)

In our study 150 students have siblings, among them 59(37%) are alcohol users, & among 94 students who have no siblings, 28(30%) are alcohol users. But P value is 0.168 which is statistically insignificant. (Table 2)

Out of total 174 students who belong to nuclear family, 63(36%) are alcohol users & out of total 70 students who belong to joint family, 24(34%) are alcohol users in this study.

P value is 0.892 which is not statistically significant. (Table 3) Present study revealed that total 119 students are under stress, among them 52(44%) use alcohol & out of total 125 students without any stress, 35(28%) are alcohol users.

P value is 0.015, which is statistically significant. (Table 4) In this study out of total 75 students having depression, 38(51%) use alcohol and there are 169 students without any depression, among them 49(29%) are alcohol users. P value is 0.002, which has got strong statistical significance. (Table 5)

Total 150 students have some sorts of extracurricular activities, among them 58(39%) use alcohol & out of total 94 students without any extracurricular activities, 29(31%) are alcohol users. (Table 6)

In our study there are total 65 students who have family history of alcohol consumption, 40(62%) use alcohol themselves, whereas out of total 179 students without any family history, 47(26%) are alcohol users. This is statistically significant. (Table 7)

Present study showed that out of total 184 hostellers, 75(41%) is alcohol users, but among total 60 day scholars, only 12(20%) use alcohol, which is significant. (Table 8)

Among total 87 alcohol users, almost half of them (48%) are occasional drinker i.e. consume alcohol less than once in 2-3 months duration. (Table 9) In this study almost 3/4<sup>th</sup> of alcohol users show no alteration in academic performances (Table 10) and among total 87 alcohol users, almost half of them (51%) told that their relationship with parents remained unaffected. (Table 11)

Only one fourth participants among alcohol users admitted to have some behavioural change in our study. (Table 12)

### **Discussion:**

In our study, total consented participants were 244. Out of that, only 87 (35.66%) students consumed alcohol which includes the students who took alcohol or tasted once in life or occasional drinker or frequent users/abusers.

The prevalence of alcohol use of present study falls within the broad range (7-86%) of prevalence rate observed in different Indian & Foreign studies. [5-11]

A total of 157 (64.34%) participants have never tasted alcohol in life till this study period. Present study showed male preponderance regarding alcohol use, which is statistically significant. This may be due to social taboo of avoidance of alcohol by females.

Male predominance observed in present study corroborates well with other studies. [8, 10-15] The study reveals alcohol use has no statistically significant relation with the siblings' status or family types of the participants (P value is 0.168 and 0.892 respectively).

As the composition of study population with regard to nuclear or joint family is not uniform there might be a sampling error.

This study described strong association between presence of stress and depression in participants with alcohol consumption.

Here P value is 0.015 and 0.002 respectively both of which are statistically

significant. The reason behind this may be due to the fact that the youth try to get rid of the stressful situation by consuming alcohol.

This finding corroborates well with an Indian study by Kumar P, Basu D. [16]

Association with depression may be attributed to the fact that young students have strong belief that depression can be cured by intake of alcohol. Similar observation is also found in some other studies. [5, 7]

Being engaged with some sorts of extracurricular activities does not provide any protection from alcohol.

Having some family history of alcohol consumption among father, brother or other family members has got a strong impact on alcohol use by the students (P value is 0.000).

The cause behind that may be habit formation of the students from the childhood as they are very well accustomed with the practices of alcohol consumption among family members.

That strong association between alcohol use & family history of alcohol consumption is also observed in works of other researchers. [7, 16, 17] Statistical significant relationship exists between residential status of the participants with their habit of alcohol use (P value is 0.006), but this might be due to the fact that, the proportion of student living in hostel is much higher than day scholars in this institute.

In this study population, almost half of the alcohol users were occasional drinker, there was very few numbers of problem drinker.

That finding does not corroborate well with the finding of other studies [6, 15, 18] reason behind these may be easy accessibility of alcoholic beverages in other places or influence of the climatic conditions. In present study, academic performances of almost 3/4<sup>th</sup> of the alcohol users remain unaffected.

Reason behind this may be that most of the alcohol users are occasional drinker, & that less amount of alcohol does not have any impact on study pattern. Similar finding is observed in study conducted by Sandra E. File et al.<sup>(19)</sup> But just the reversed observation i.e. better performance after alcohol use, is seen in the works done by David C. Clark et al. [14]

There is a little impact of alcohol use on bonding with parents, as in 35% cases, they maintain good relation, & in 50% cases, no change in relationship pattern.

This might be due to consumption of alcohol in trivial amount in most of the cases. There is no behavioural change at all in 3/4<sup>th</sup> of the alcohol users. This can be also attributed to the fact of infrequent use of insignificant amount of alcohol by most of the users.

From this study it is quite obvious that till now alcohol intake, in this Medical College of semi urban area is confined to infrequent and insignificant level. Identification of depression in students and psychological counselling or treatment of those pupil with stress management might be the solution of the budding problem of alcoholism of this newly established Medical college of the eastern India.

Medical colleges need to build up guidelines to modify the students psyche towards the alcoholism which is taken as a way out to alleviate apprehension, worry, and strain produced from academic pressure, workload of curricula.

### Shortcomings:

This study accrued data based on a self-reported questionnaire by students which might have some subjective variations. Though Anonymous questionnaire are designed to curtail the problem of underreporting but cannot be overruled due to socio – cultural taboo.

### Conclusion:

From the observation obtained from present study, it can be concluded that stress reduction among medical students is must. Emphasis should be given to learn the art of handling the depression or stress of life.

There will be prospects of group therapy and counselling to make them perfect future medicos. A non-punitive, compassionate attitude, with regular counselling for those brilliant but susceptible medical students who were mislaid in the vortex of alcohol abuse might save medical stall worth of the future.

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**Table 1: Relationship of Gender of Participants of Three MBBS Batches with Alcohol Use**

Alcohol use	1 <sup>st</sup> MBBS (n=79)		2 <sup>nd</sup> MBBS (n=98)		3 <sup>rd</sup> MBBS part I (n=67)		Total (n=244)	
	Male(n=45)	Female (n=34)	Male (n=58)	Female (n=40)	Male( n=42)	Female (n=25)	Male (n=145)	Female (n=99)
Yes	13(28.9%)	8(23.5%)	29(50%)	13(32.5%)	19(45.2%)	5(20%)	61(42%)	26(26%)
No	32(71.1%)	26(76.5%)	29(50%)	27(67.5%)	23(54.8%)	20(80%)	84(58%)	73(74%)

**Table 2: Relationship of Sibling Status of Participants with Alcohol Use**

Alcohol use	Have siblings n= 150		No siblings n= 94		Statistics
	n	%	n	%	
Yes	59	(37%)	28	(30%)	Chi square value 1.898, Degree of freedom 1, P=0.168
No	91	63%	66	(70%)	

**Table 3: Relationship of Type of Family of Participants with Alcohol Use**

Alcohol use	Nuclear family n=174		Joint family n= 70		Statistics
	n	%	n	%	
Yes	63	(36%)	24	(34%)	Chi square value 0.018, Degree of freedom 1, P=0.892
No	111	(64%)	46	(66%)	

**Table 4: Relationship of Stress of Participants with Alcohol Use**

Alcohol use	Stress present n= 119		No stress n= 125		Statistics
	n	%	n	%	
Yes	52	(44%)	35	(28%)	Chi square value 5.881, Degree of freedom 1, P=0.015
No	67	(56%)	90	(72%)	

**Table 5: Relationship of Depression of Participants with Alcohol Use**

Alcohol use	Depression present n= 75		No depression n= 169		Statistics
	n	%	n	%	
Yes	38	(51%)	49	(29%)	Chi square value 9.711, Degree of freedom 1, P=0.002
No	37	(49%)	120	(71%)	

**Table 6: Relationship of Extracurricular Activities (ECA) of Participants with Alcohol Use**

Alcohol use	Have ECA n= 150		No ECA n= 94		Statistics
	n	%	n	%	
Yes	58	(39%)	29	(31%)	Chi square value 1.217, Degree of freedom 1, P=0.270
No	92	(61%)	65	(69%)	

**Table 7: Relationship of Family History of Alcohol Consumption of Participants with Alcohol Use**

Alcohol use	Positive family history n = 65		Negative family history n= 179		Statistics
	n	%	n	%	
Yes	40	(62%)	47	(26%)	Chi square value 24.357, Degree of freedom 1, P=0.000
No	25	(38%)	132	(74%)	

**Table 8: Relationship of Residential Status of Participants with Alcohol Use**

Alcohol use	Hostellers n=184		Day scholars n= 60		Statistics
	n	%	n	%	
Yes	75	(41%)	12	(20%)	Chi square value 7.619, Degree of freedom 1, P=0.006
No	109	(59%)	48	(80%)	

**Table 9: Alcohol Users (n=87) According to Frequency of Alcohol Consumption**

Daily	Once in week	Once in month	Once in 2-3 month	Occasionally
0	15 (17%)	12 14%	18 (21%)	42 (48%)

**Table 10: Alcohol Users (N=87) According to Deterioration of Academic Performances**

Deterioration of academic performances present	No deterioration of academic performances
25 (29%)	62 (71%)

**Table 11: Alcohol Users (N=87) According to Relationship with Parents**

Good Relation	Bad Relation	Deteriorating Relation	Relation Not Effected
30 (35%)	6 (7%)	6 (7%)	45 (51%)

**Table 12: Alcohol Users (n=87) According to Behavioral Change**

Yes	No
21 (24%)	66 (76%)