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Status of Alcohol Consumption among Medical Students in Nepalgunj Medical College: A Descriptive Cross-Sectional Study

Saharoj Siddiqui[1]*, Priyadarshini Shah Singh[2], Aashish Pandey[1], Nandita Gurung[3], Ambalika Shukla[1], Ashutosh Kumar Shah[1]

Abstract

Background: The growth in alcohol consumption is skyrocketing. Alcohol ranks first as the most commonly misused substance by medical students. Considerably more stress has been documented among medical students. They tend to consume alcohol to cope with stressful situations. Excessive drinking can lead to consequences like loss of concentration and poor performance in academics. While there is extensive research on alcohol consumption patterns in various populations, there is a notable scarcity of localized studies, particularly in medical schools in periphery of Nepal. This study aims to fill the gap by providing specific data on the status of alcohol consumption among students at Nepalgunj Medical College. **Methods:** A descriptive cross-sectional study was carried out among medical students of Nepalgunj Medical College. **Results:** Among 406, 15% (61) consumed alcohol. Among the alcohol consumers, 15% were CAGE positive and possibly have alcohol problems and all of them were male. About 32.8% of them initiated drinking due to peer pressure, 29.5% of the students started out of curiosity. **Conclusion:** The prevalence of alcohol consumption is comparatively lower among medical students in Nepalgunj Medical College. However, the alcohol problem is more among the drinkers. Alcohol problem is very common in male and final-year students. The most common reasons for initiation of drinking by them is peer pressure. Further studies regarding alcohol abuse pattern, its determinants, and treatment among the medical students are the current necessities to apply the proper interventional strategies to ensure the production of compatible and genuine doctors in the future.

Keywords: Alcohol, CAGE, Medical students, Nepal, Substance abuse

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Introduction

The growth in alcohol consumption is skyrocketing, increasing global suffering. It has become one of the most common substances being abused and a matter of global public health concern. Substance abuse is a pattern of use of any substance legal or illegal that creates consequential problems and distress.[1] Tobacco, nicotine, marijuana, alcohol, painkillers, hallucinogens, etc. are the common substance of abuse.[2] In the context of Nepal, alcohol is the second most abused drug following tobacco.[3] In the community of medical students, Alcohol ranks first as the most common substance of misuse, tobacco and marijuana are second and third, respectively.[4]

Alcohol can affect almost all the systems of the body. It hinders the proper communication pathways in the brain, impairs the control of balance, memory, speech, and causes brain atrophy in long-term use.[5] Alcohol can cause drowsiness, euphoria, mood alteration, impulsive behavior, etc. as a temporary effect and can cause insomnia, anxiety, weakening of the body defense mechanism, and many chronic diseases related to the heart, brain, and glands.[6] Regular alcohol consumption invites financial problems, unintentional injuries, and many social problems, and driving under alcohol influence has been one of the major causes of road traffic accidents.[7] The US considers 14 g of pure alcohol which is found in 12 ounces of beer containing 5% alcohol content or five ounces of wine that contains 12% of pure alcohol as standard. "Binge drinking, heavy drinking, and any drinking by pregnant women or people younger than age 21" is considered excessive and can lead to hazardous consequences.[8]

The journey of a medical student is a long and tedious one. Considerably high levels of stress, exposure to excessive workload, peer pressure, and psychological morbidities such as burnout, anxiety, and depression have been documented among students in the medical field. It makes the students vulnerable to substance abuse.[9,10] They tend to consume alcohol to cope with stressful situations, as a bypass method to relieve anxiety, and also for socialization.[11,12] Excessive drinking can lead to several harmful consequences such as the loss of concentration, decreased memory, poor performance in academics, decrease in productivity, and burnout.[13-15] High prevalence of alcohol consumption has been reported in medical students.[16] Being medical student, extreme levels of primary prevention are a must; however, it is a hypocrisy that such high prevalence prevails among them.

Health and soundness of mind are requirements of supreme importance for medical students which has been degrading

[1]Department of Psychiatry, Nepalgunj Medical College, Nepalgunj, Banke, Nepal.

[2]Department of Community Medicine, Kathmandu University, Nepal.

[3]Deapartment of Psychiatry, Nepalese Army Institute of Health Sciences, Sanobharyang, Bhandarkhal, Kathmandu, Nepal.

Corresponding Author: Saharoj Siddiqui, Nepalgunj Medical College, Nepalgunj, Banke, Nepal. Phone: +9779867221786. E-mail: sahroz.sid17@gmail.com

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with the increase in the trends of alcohol consumption by medical students. While there is extensive research on alcohol consumption patterns in various populations, there is a notable scarcity of localized studies in Nepal, particularly in medical schools in the periphery of Nepal. This study aims to fill the gap by providing specific data on the status of alcohol consumption among students at Nepalgunj Medical College.

Materials and Methods

Study Design

This descriptive cross-sectional study was conducted among medical students at Nepalgunj Medical College. Data collection commenced after obtaining ethical approval from the Institutional Review Committee of Nepalgunj Medical College, Banke, Nepal (Ref. 46/079-080). The study's aims and objectives were clearly explained to participants, and informed consent was obtained, ensuring the confidentiality of all participants. The study period spanned from February 1 to March 30, 2023, lasting 2 months.

Study Population

Inclusion criteria

All students enrolled in the Bachelor of Medicine and Bachelor of Surgery (MBBS) program at Nepalgunj Medical College during the study period were willing to participate.

Exclusion criteria

Doctors, interns, and students from paramedical fields were excluded from the study.

Recruitment of Participants

Sampling frame

A comprehensive list of all registered undergraduate medical students was obtained, encompassing a total of 406 MBBS students from first to final year, all of whom were included in the study.

Data collection

A Google Form was developed that included:

- Study details
- Informed consent
- Questions regarding alcohol consumption
- Reasons for initiation of drinking
- The CAGE questionnaire, which screens for potential alcohol problems through four questions: Cut down, annoyed, guilty, and eye-opener. Responses were recorded as 0 for "No" and 1 for "Yes," with a higher score indicating potential alcohol issues. Scores of 2 or higher were deemed CAGE positive, indicating the presence of alcohol problems. The CAGE questionnaire has a sensitivity of 74% and specificity of 91%.[13,17]

Participant Recruitment

Official emails of all students were collected from the college administration. A pre-test of the survey was conducted with a small group of students to ensure the clarity and functionality of the online platform. Invitations to participate in the survey were disseminated through email and official WhatsApp batch groups.

Statistical Analysis

Data collected through the Google Form were imported into the Statistical Package for the Social Sciences (SPSS Version 22) for analysis. The key variables were alcohol consumption status, reasons for initiation of drinking, CAGE scores, etc. Results were presented using tables and figures to facilitate a clear understanding and interpretation of the findings.

Results

As in Figure 1, out of a total of 406 students, 85% (345) students did not consume alcohol while 15% (61) consumed alcohol.

As in Table 1, out of the total students who consumed alcohol, 32.8% (20) of them initiated drinking due to peer pressure, 29.5% (18) of the students started out of curiosity, and 18% (11) of them consumed to relieve their stress.

[Table 2] shows the percentage of responses to each item of the CAGE questionnaire. Out of the total number of students who consumed alcohol, 38.69% (30) of them felt the need to cut down on their drinking and 28.57% of them felt guilty about their drinking as well.

As in Table 3, out of the total students who consumed alcohol, 83.6% (51) were male and the rest were female. Among them, 15% (9) were CAGE positive and all of them were male.

As in Table 4, 66.7% of the final-year students who consumed alcohol were CAGE positive while only 12.5% of first-year students who consumed alcohol were CAGE positive.

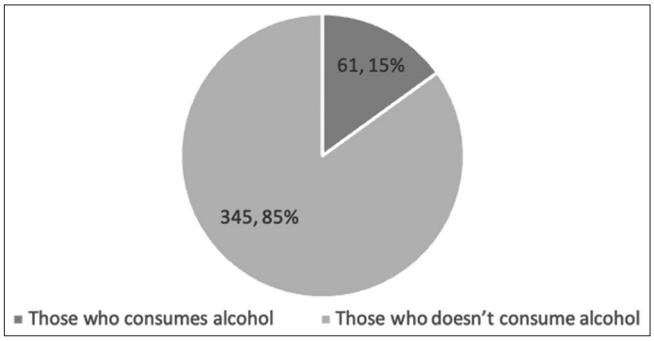

Figure 1: Pie-chart showing the percentage of students who consume alcohol

Table 1: Reasons for initiation of drinking

S. No	*Reasons of initiation of drinking*	*No. of people*	*Percentage*
1	Curiosity	18	29.5
2	Peer Pressure	20	32.8
3	Because you felt like it	4	6.5
4	Influence of an adult	4	6.5
5	To relieve stress	11	18
6	Others	4	6.5
	Total	61	100

Table 2: Items of CAGE questionnaire along with responses

Cage items	*Responses (Yes)*
Have you ever felt the need to cut down on your drinking?	38.69% (23)
Have people annoyed you by criticizing your drinking?	(25.97%) 20
Have you ever felt guilt about drinking?	(28.57%) 22
Have you ever felt you needed a drink first thing in the morning to steady your nerves or to get rid of a hangover?	(12.98%) 10

Table 3: Percentage of CAGE positive based on gender

Gender	*Negative*	*Positive*	*Total*
Male	42	9	51
Female	10	0	10
Total	52 (85%)	9 (15%)	61 (100%)

Table 4: Percentage of CAGE-positive students based on year of study

Year of study	*Total CAGE score (%)*	
	Negative	*Positive*
	Count <2	*Count ≥2*
1st year	87.5	12.5
2nd year	80.56	19.44
3rd year	78.8	22.2
Final year	33.3	66.7

Discussion

Out of the 406 undergraduate medical student participants, the prevalence of alcohol consumption was 15% (61). A study conducted on medical students of a medical college in Dharan, Nepal, showed a 59.6% prevalence of alcohol consumption.[4] Alcohol consumption and abuse were among 60% of students of Nepalgunj Medical College.[18] In contrast to our study which was also done among medical students of Nepalgunj Medical College, these studies reported a very higher percentage of alcoholic students. However, some studies outside the country, carried out the medical students have shown an even higher prevalence of alcohol consumption than that of Nepali students.[19,20] When talking about the studies done on youths of Nepal in general, there were around 70% current drinkers in Kachan Kawan municipality and 73.6% current drinkers in Surya Binayak municipality of Nepal which exceeded the prevalence rate among Nepali medical students.[21,22] The result of our study suggests a higher prevalence of alcohol consumption in males than females which is consistent with the finding of the above-mentioned studies in Dharan and Nepalgunj Medical College which too concluded male alcohol consumers predominated the female consumers' number. The predominance of alcohol abuse among males may be due to the general makeup of the societies of Nepal that provides them more freedom and exposure to the opportunity of alcoholism.

According to our study, the most common reason for the initiation of drinking by the medical students of Nepalgunj Medical College was peer pressure (32.8%). Curiosity was the second and relieving stress was the third most common cause of why students started drinking. A study conducted on early adolescents to find out the motive of having their first drink shows 42.5% of people drank for the first time to toast while 36.4% of the subjects drank out of curiosity to feel the effect of alcohol similar to our study.[23] Peer pressure has been also called one of the prominent causes that trigger the beginning of drinking in all age groups even in teens.[24]

Out of the total number of alcohol consumer students, more than one-third of them felt the need to cut down their drinking, and more than a quarter of the students felt guilt about their drinking, or became annoyed when they were criticized about it as depicted in Table 2. When the person who consumed, alcohol was screened using the CAGE items, around 15% (9) were found to be positive which signifies they are most likely to have some sort of alcohol problems [Table 3]. In a study carried out in Portugal, the CAGE questionnaire was positive on 10% of the medical students which is lower than Nepali medical students.[25] Only 8% of medical students in Jordon were positive for the CAGE questionnaire which is even less than half compared to medical students of Nepal.[26] All the females among the consumers were CAGE negative and all the CAGE positive consumers were male. This may indicate the increased likelihood of misuse of alcohol by male medical students than females. As in Table 4, around two-thirds of final-year medical students and only 12.5% of medical students in their 1st year were having alcohol problems as indicated by their CAGE-positive scores. The misuse of alcohol is very high among final-year medical students concerning the junior students.

The findings of this study should be considered in light of limitations like its cross-sectional design, and the application of an online questionnaire. The sample is not representative of all the undergraduate medical students of Nepal. The participants of this study are from different places over Nepal which makes the studied sample nearly similar to a representative sample. The study has not explored the frequency and amount of alcohol consumption and its effect on their day-to-day life.

Conclusion

The prevalence of alcohol consumption is comparatively lower among undergraduate medical students in Nepalgunj Medical College. However, the alcohol problem is more among the drinkers. Alcohol problem is very common in male and final-year students. The common reasons for initiation of drinking by Nepali medical students are peer pressure, curiosity, and to relieve stress. Further studies regarding the patterns of alcohol abuse, its determinants, early diagnosis of alcohol dependence, and treatment among the medical students of Nepal are the current necessities to apply the proper interventional strategies to ensure the production of compatible and genuine doctors in the future.

Conflicts of Interest

The authors declare no conflicts of Interest.

Acknowledgement

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