ORIGINAL ARTICLE

An Assessment of Prevalence of Alcohol Consumption, Drinking Behaviors, and Alcohol Use Disorders Among Medical Students of UPUMS, Saifai, Etawah, Uttar Pradesh: A Cross-Sectional Study

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ABSTRACT

Background: Alcohol consumption during college is trending now a days. Early age alcohol user can be potential chronic alcoholics. They are at increased risk for academic failure, mental health problems, antisocial behavior, Road traffic accidents, early onset dementia, and development of alcohol use disorders. Identifying students at risk enables timely interventions. **Aim & Objective:** To estimate the prevalence of alcohol consumption and assess alcohol use disorders (AUDs) and identify drinking behaviors among medical students at UPUMS, Saifai, Etawah. **Settings and Design**: Cross-sectional study conducted among undergraduate medical students of four MBBS batches at UPUMS. **Methods and Material**: A structured questionnaire including the AUDIT tool was administered via Google Forms. Complete enumeration was done among 460 students. Incomplete responses were excluded. **Statistical analysis used**: Descriptive statistics and chi-square tests were performed using SPSS version 26. **Results**: Alcohol consumption prevalence was 19.8%. Most students began alcohol use after age 19, citing fun and experimentation as reasons. Alcohol use was significantly associated with age and family history of alcohol use ($p < 0.001$). AUDIT revealed that 12% of drinkers were at increasing risk for AUDs. **Conclusion**: The study highlights a notable prevalence of alcohol use among medical students, with risk factors including age and family history. Early detection is essential to prevent dependency.

KEYWORDS

Alcohol Use Disorder; Medical Students; Drinking Behavior; AUDIT, Prevalence; College Students

INTRODUCTION

Alcohol consumption during college is a rising concern, especially among medical students, where academic pressure and clinical stress may trigger its use as a coping mechanism.(1,2) Early initiation of alcohol consumption strongly predicts long-term dependence and related health complications. (3)
Early initiation of alcohol use is alarming due to its potential to progress into chronic alcoholism.(4) Chronic alcohol use has been associated with academic underachievement, absenteeism, antisocial behavior, depression, anxiety, liver disease, and increased susceptibility to accidents. Moreover, alcohol misuse may also contribute to risky behaviors, including unsafe sexual practices and impaired driving, further endangering the well-being of students and those around them. (5-8)
Despite their knowledge of the adverse effects of substance use, medical students are not immune. Research has indicated that alcohol use may be more prevalent among medical students than their non-medical counterparts, potentially due to the

distinct pressures associated with medical education and clinical responsibilities. (9,10)
Identifying students at risk of developing AUDs can facilitate timely psychological support, promote healthier coping mechanisms, and help maintain the overall academic and personal well-being of future healthcare professionals.(11,12)

Aim & Objective: To evaluate the prevalence, patterns of alcohol consumption, and prevalence of Alcohol Use Disorders among undergraduate medical students of UPUMS, Saifai of Etawah district

- To estimate the prevalence of alcohol consumption among undergraduate students of UPUMS, Saifai of Etawah district
- To evaluate Alcohol Use Disorders and examine drinking patterns among undergraduate medical students of UPUMS, Saifai, in the Etawah district.

Material & Methods

Study Type and Study Design

A **cross-sectional study** was carried out after obtaining approval from the Institutional Ethics Committee (IEC) of Uttar Pradesh University of Medical Sciences (UPUMS).

Study Setting

The study was conducted at UPUMS, Etawah, Uttar Pradesh.

Study Population

The study population included medical students from four MBBS batches (2020, 2021, 2022, and 2023) who gave informed consent to participate.

Study Duration

The study was conducted in 6 months

Sample Size Calculation

A total of **460 students** participated in the study. Sample size was calculated by complete enumeration method.

Inclusion Criteria

- All MBBS students from the 2020–2023 batches who gave informed consent.

Exclusion Criteria

- Students who submitted incomplete responses were excluded from the final analysis.

Strategy for Data Collection

A cross-sectional study was carried out after obtaining approval from the Institutional Ethics Committee (IEC) of Uttar Pradesh University of Medical Sciences (UPUMS). The study included 460 medical students from four MBBS batches (2020, 2021, 2022, and 2023) who gave informed consent to participate. Students who submitted incomplete response were excluded from the final analysis. Information was gathered through a structured, self-administered questionnaire distributed online using Google Forms.(13,14) The forms were kept anonymous to ensure that students felt comfortable providing honest responses, as they might have altered their answers out of concern for being judged by faculty members. This measure was taken to minimize interviewer bias. The questionnaire included sections on socio-demographic details, drinking habits, and the Alcohol Use Disorders Identification Test (AUDIT)—a globally recognized screening tool developed by the World Health Organization to detect hazardous and harmful alcohol consumption. (15,16)

Working Definition

Alcohol consumption behavior was assessed using the **Alcohol Use Disorders Identification Test (AUDIT)**—a standardized World Health Organization (WHO) tool

Ethical Issues and Informed Consent

Approval was obtained from the **Institutional Ethics Committee (IEC), UPUMS**. Informed consent was obtained from all participants prior to data collection. Anonymity and confidentiality were strictly maintained.

Data Analysis – Software

The collected responses were compiled in Microsoft Excel and then analyzed using IBM SPSS version 26. Descriptive statistics, including frequencies and percentages, were utilized to summarize the socio-demographic characteristics and alcohol consumption patterns. To examine associations between alcohol use and variables such as age group, gender, and family history of alcohol consumption, Chi-square tests were conducted—an analytical method widely used in behavioral and epidemiological studies to assess relationships between categorical variables. (17,18)

Results

Among the 460 students surveyed, 19.8% (n = 91) reported consuming alcohol.

Table 1 shows the sociodemographic profile of the study participants. It reveals that the majority were male and predominantly belonged to the 21–30 years age group indicating a largely young adult population. Most participants were single and resided in urban areas. In terms of religion, the majority were Hindus, followed by Muslims and a small number of Sikhs. The nuclear family structure was more common than joint families. Regarding parental occupation, most fathers were employed in government jobs, while a significant proportion also worked in business or other occupations. Mothers were primarily housewives, with a smaller percentage engaged in government or private jobs.

Table 1: Sociodemographic profile

Variables		Frequency	Percent
Sex	Female	190	41.3
	Male	270	58.7
Age group	≤20	129	28.0
	21-30	319	69.3
	≥31	12	2.6
Marital status	Married	10	2.2
	Single	450	97.9
Residence	Rural	181	39.3
	Urban	279	60.7
Religion	Hindu	396	86.1
	Muslims	61	13.3
	Sikh	3	.7
Type of family	Joint	127	27.6
	Nuclear	333	72.4
Occupation of father	Business	94	20.4
	Government job	145	31.5
	Other	137	29.8
	Private job	84	18.3
Occupation of mother	Business	2	.4
	Government job	29	6.3
	House wife	304	66.1
	Others	117	25.4
	Private job	8	1.7

Table 2 shows the age and reasons for initiation of alcohol among users. It indicates that the most common reasons for initiating alcohol were for fun and experimentation, followed by stress and peer pressure. Only a small percentage cited style or status as the reason. The majority of participants initiated alcohol use at or after the age of 19, with only starting at or before 18 years of age.

Table 2: Age and Reason for initiation of alcohol

Variables		Frequency	%
Reason for initiating alcohol	Due to peer pressure	7	7.69
	Due to stress	17	18.68
	For experimentation	31	34.06
	For fun	32	35.16
	Style statement	4	4.39
Age of initiation	≤18 year	5	5.49
	≥19 year	86	94.50

Table 3 presents the relationship between alcohol consumption and various sociodemographic factors. A statistically significant association was observed between age group and alcohol use, with the highest prevalence noted in the 21–30 age group. Additionally, a significant link was identified between alcohol consumption and family history of alcohol use, indicating that individuals with a family history of alcohol use were more likely to consume alcohol than those without such a background.

Table 3: Association of Alcohol intake with sociodemographic variables

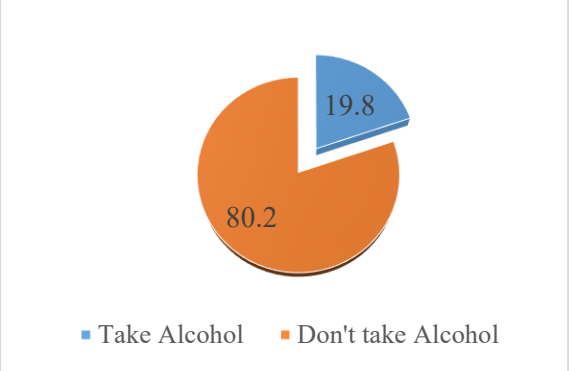
Variables		Alcohol intake		Chi square	df	P value
		Yes	No			
Age group	≤20	10	119	21.465	2	<0.001
	21-30	75	244			
	≥31	6	6			
Family history of alcohol intake	No	66	334	20.82	1	<0.001
	Yes	25	35			
Total		91	369			

Table 4 shows the distribution of drinking behaviour among the alcohol users based on the AUDIT scale. The majority were categorized under low-risk drinking. None of the participants fell into the higher-risk or probable dependence categories, indicating that most alcohol use among participants was at a non-dependent level.

Table 4: Distribution of study participants according to Drinking behaviour

Variables		Frequency	Percent
Audit Category	Low Risk	80	87.9
	Increasing Risk	11	12.0
	Higher Risk	0	0
	Probable Dependence	0	0
	Total	91	99.9

Figure 1 Prevalence of alcohol intake



DISCUSSION

In the current study, the prevalence of alcohol consumption among medical students at Uttar Pradesh University of Medical Sciences, Etawah, was found to be 19.8%. This result aligns with the findings of a systematic review and meta-analysis conducted by Sahu et al. (2022)20, which analyzed 31 studies across India and reported a pooled alcohol use prevalence of 27.1% among students.

The study revealed, alcohol consumption was more prevalent among male students (58.7%) than female students (41.3%). This trend is in line with the findings of Sahu et al. (2022)20, who reported that males were approximately five times more likely to consume alcohol compared to females. Furthermore, students in the 21–30 age group exhibited higher rates of alcohol use, reflecting similar trends seen in other research. For example, a mixed-method study by Lokesh et al. (2023)21 in Puducherry found that the average age of students who consumed alcohol was 20 years.

In the present study, the main reasons cited by participants for initiating alcohol use were enjoyment (35.16%) and experimentation (34.06%). These findings are comparable to those of Singh et al. (2020)19, who reported curiosity (43.6%) as the leading cause of initiation among medical students. Likewise, Lokesh et al. (2023)21 found that stress, peer pressure, and curiosity were key factors contributing to substance use.

Alcohol consumption is associated with a positive family history of alcohol use. Students with a familial background of alcohol use showed higher prevalence rates, underscoring the impact of family influence on drinking behavior. This observation is consistent with the findings of Lokesh et al. (2023)21

study found that 87.9% of students who consumed alcohol were classified as low risk, while 12% were identified in the increasing risk category. No participants were found in the higher-risk or probable dependence categories. These results indicate that although the majority of students consume alcohol at relatively low-risk levels, a significant minority may be developing more hazardous drinking patterns, highlighting the need for early preventive measures.

CONCLUSION

19.8% is the overall prevalence, which is a noteworthy finding. A statistically significant association was identified between alcohol consumption and both age and family history of alcohol use. At this point, most students fall into the low-risk category for alcohol use disorder. Early identification at this stage is vital, as intervening now can help prevent the progression to physical dependence or the development of chronic alcoholism.

RECOMMENDATION

- Routine screening using AUDIT in university health settings
- Counseling services for at-risk students
- Peer-support and awareness campaigns targeting substance use prevention

LIMITATION OF THE STUDY

- Cross-sectional design limits causality assessment
- Self-reported data may be subject to bias
- Generalizability is limited to one institution

Relevance of the Study

Highlights the need for alcohol use screening in educational institutions, especially among future healthcare professionals who face high levels of stress

Authors Contribution

All authors have contributed equally.

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Nil

Conflict of Interest

There are no conflicts of interest.

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Declaration of Generative AI and AI Assisted Technologies in the Writing Process

The authors haven't used any generative AI/AI assisted technologies in the writing process.

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