



A STUDY ON TREND OF SUBSTANCE ABUSE AMONG MEDICAL STUDENTS FROM THEIR ADMISSION TO COMPLETION OF THE COURSE

Dr Vinod Kumar Khant*

PG Resident, Department of Community Medicine, Jhalawar Medical College, Jhalawar, Rajasthan. *Corresponding Author

Dr Madhusudan Swarnkar

Senior Professor, Department of Community Medicine, Jhalawar Medical College, Jhalawar, Rajasthan.

Dr Uma Shankar Shukla

Assistant Professor cum statistician, Department of Community Medicine, Jhalawar Medical College, Jhalawar, Rajasthan.

ABSTRACT

Introduction: Substance abuse remains a hidden but well-known phenomenon among medical professionals and physicians around the world and is considered to be of particular importance among medical students. The study aims to assess the trend of substance abuse among medical students from their admission to completion of the course and various reasons to start these habits. **Methods:** A cross-sectional study was conducted among medical students who were admitted to Batch-2018 and doing their internship. Data was collected using a structured anonymous questionnaire and analysed using IBM-SPSS. **Results:** The trend of substance abuse among medical students at the time of admission was 5% which was significantly increased to 40.7% on completion of the course. Alcohol, cigarettes and hookah were the most commonly abused substances. Occasion celebration, getting pleasure, psychological stress and peer pressure were the main reasons for substance abuse. **Conclusions:** There is a rise in the trend of substance abuse among medical students from their admission to completion of the course not only in males but also females.

KEYWORDS : Medical student, substance abuse, trend

INTRODUCTION

Substance abuse refers to the harmful or hazardous use of psychoactive substances, including alcohol and illicit drugs.^[1] WHO estimates show that the burden of worldwide psychoactive substance use is around 2 billion alcohol users, 1.3 billion smokers, and 185 million drug users.^[2] Many college students have academic stress, financial strain, mental stress due to isolation or competition, a feeling of being overwhelmed by workload, potential for academic dishonesty, social pressure to conform, a mismatch between chosen major and career aspirations which leads to some students may turn to unhealthy coping mechanisms like alcohol or drug abuse to manage these stressors.^[3] The variety of substances abused is very wide, but common ones are alcohol, tobacco, stimulants, sedatives, hallucinogens, opioids, and cannabis.^[4]

The effect of substance abuse is highest on the psychological health of college students with the possibility of developing substance use disorder, leading to major behaviour changes observed, including mood disorders, anxiety etc and leads to long lasting effects like cancers. Other consequences like bad social behaviours and criminal activities are also increasing.^[5] Research studies conducted at other medical colleges have shown that medical students are more likely to abuse drugs. However, this kind of research is not being carried out in medical colleges in the southeastern region of Rajasthan. Therefore, keeping in this background, the present study was carried out at Jhalawar Medical College, Jhalawar, Rajasthan to assess the trend of substance abuse among medical students from admission to completion of the course and the various reasons for starting these habits.

METHODOLOGY

A cross-sectional analytical study was conducted among intern medical students who were admitted to Batch 2018 and doing their internship at Jhalawar Medical College.

Inclusion criteria:

1. Intern medical students who were admitted in Batch 2018.
2. Students who were present on the day of data collection.
3. Students who gave consent for study.

Exclusion Criteria:

1. Students who submitted incomplete or blank sheets.
2. Students who graduated from other medical colleges in India and from foreign medical institutions.

Study Duration: The study was conducted over a period of two month.

Sample Size: Total of 150 students were admitted to the medical college in batch 2018, out of them 144 students were doing the internship during the study period. After applying inclusion and exclusion criteria only 140 students were eligible for study, so the sample size was 140 after complete enumeration.

Study Tools: Data was collected using semi-structured anonymous questionnaire which included questions related to socio-demographic characteristics and details of various substance abuse.

Method Of Data Collection:

After getting ethical approval from the institutional ethical committee, all the eligible intern students were approached in their respective posting places and written consent was obtained. They were assured that their responses would be kept anonymous and confidentiality maintained. The questionnaire was administered to all the 140 students. Information related to sociodemographic factors, history of substance abuse at the time of admission and substance abuse on the completion of course, sources of substance, reasons for substance abuse and family history of substance abuse were collected. Investigators were unaware of participants' status at admission; this can reduce bias that may arise from prior knowledge of the participants' history.

Statistical Analysis:

The data was entered in Microsoft Excel 365 and analyzed using IBM SPSS statistics software (Trial version 29.0). Descriptive statistics of sociodemographic information, trend of substance abuse, sources of substance, and reasons for substance abuse were determined. The chi-square test was used to determine association between substance abuse and various variables. Fisher's exact test was applied whenever,

more than 20% of cells expected frequency was less than 5 in a two-by-two table. The *P*-value of less than 0.05 was considered significant at 95% confidence interval.

Ethical Clearance:

The research protocol was reviewed and approved by the Institutional Ethics Committee with S. No. 04 dated 21.02.2024, at Jhalawar Medical College, Jhalawar, Rajasthan.

RESULT

A total of 140 students were participated in the current study, out of which 80 (57.1%) were male and 60 (42.9%) were female, majority of the participants were Hindu by religion 120 (85.7%). Majority of the participants (119, 85.0%) were hostellers and 21 (15.0%) were day scholars. The mean age of the participants was 23.87 ± 1.18 years (mean $\pm$ SD).

Table 1: Trend Of Substance Abuse At The Time Of Admission And On Completion Of Course

Trend of Substance Abuse	Substance abuse		P-value
	Yes N (%)	No N (%)	
At the time of admission (n=140)	7 (5.0)	133 (95.0)	<0.01
On completion of the course (n=140)	57 (40.7)	83 (59.3)	

Chi square value = 50.636, degree of freedom = 1

Alcohol (30%), Cigarettes (19.3%), and Hookah (9.3%) were the most commonly abused substances while Ganja, Bidi, Khaini and Gutkha were least common abused substances on completion of the course. Among 57 substance abusers, 68% bought substance buying self from shops, 30% got from friends and 2% took from parents or siblings.

Table 2: Association Of Substance Abuse At The Time Of Admission With Socio-demographic Factors (n=140)

Socio-demographic factors		Substance abuse at the time of admission		P-value
		Yes N (%)	No N (%)	
Gender	Male n=80	6 (7.5)	74 (92.5)	0.238*
	Female n=60	1 (1.7)	59 (98.3)	
Current Residence	Hosteller n=119	6 (5.0)	113 (95.0)	0.625*
	Day Scholar n=21	1 (4.8)	20 (95.2)	
Religion	Hindu n=120	2 (1.7)	118 (98.3)	<0.01*
	Muslim [†] n=5	1 (20)	4 (80.0)	
	Christian [†] n=1	1 (100)	0 (0.0)	
	Jain [†] n=14	3 (21.4)	11 (78.6)	

[†]Rows merged;

*Fisher exact test was applied.

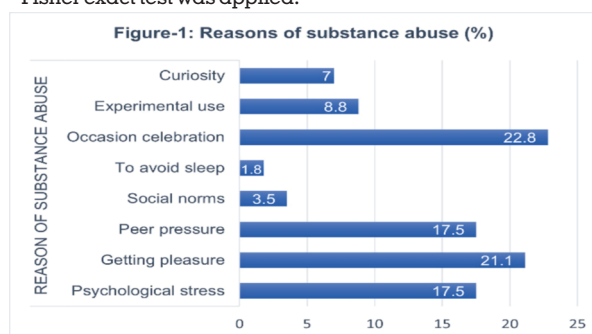


Table 3: Association Of Substance Abuse On Completion Of Course With Socio-demographic Factors (n=140)

Socio-demographic factors		Substance abuse on completion of course		P-value
		Yes N (%)	No N (%)	
Gender	Male n=80	41 (51.2)	39 (48.8)	0.003
	Female n=60	16 (26.7)	44 (73.3)	
Current Residence	Hosteller n=119	54 (45.4)	65 (54.6)	0.014
	Day Scholar n=21	3 (14.3)	18 (85.7)	
Religion	Hindu n=120	44 (36.7)	76 (63.3)	0.017*
	Muslim [†] n=5	5 (100.0)	0 (0.0)	
	Christian [†] n=1	1 (100)	0 (0.0)	
	Jain [†] n=14	7 (50.0)	7 (50.0)	

[†]Rows merged;

*Fisher exact test was applied.

Table 4: Association Of Substance Abuse And Family History Of Substance Abuse (n=140)

Overall, substance abuse among study subjects	Family history of substance abuse		Total N (%)	P-value
	Yes N (%)	No N (%)		
Yes	12 (21.0)	45 (79.0)	57 (100.0)	0.016
No	6 (7.2)	77 (92.8)	83 (100.0)	

DISCUSSION

The present study was done on trend of substance abuse among medical students from their admission to completion of the course. The mean age of the participants was 23.87 ± 1.18 years (mean $\pm$ SD) which is almost similar to previous study done by Salah H. et al where the mean age of medical interns was $23.9 (\pm 1.3)$ years.^[6] Previous study shows that adolescents and young adults are particularly susceptible to substance abuse.^[7]

The present study done on medical students showed that the trend of substance abuse at the time of admission was 5% which significantly increases to 40.7% upon completion of the course which is a similar finding as studied by Sarangi L et al prevalence of substance abuse (43.4%), Mahi R K et al overall substance abuse prevalence (39.3%), and Jaiswal HS et al Substance use was significantly higher in final year students (n = 19, 38%) than in first-year students (n = 6, 12%) but it was higher than that of Kokiwar et al where prevalence was 32.7% and much lower than that of Manghani P et al where prevalence was (68.8%).^[8-11]

In the present study, the prevalence of substance abuse was found significantly high among males (51.2%) which is almost similar to the study done by Ningombam S et al where the prevalence of substance abuse was high among males (55.33%) and it was lower than the study done by Gaikwad AV et al (61.62%) but much higher than that of Padhy et al where the prevalence was 37.22%. Another study conducted by Jain M et al also shows that the habits of smoking and alcohol consumption were significantly higher among male undergraduate students.^[12-15]

In the current study the prevalence of substance abuse among females was 26.7%, which was slightly lower than the study done by Gaikwad AV et al (29.41%) but it was much higher than that of Padhy et al where the prevalence was (7.22%).^[13-14]

In the present study substance abuse among students is significantly associated with gender, current residence, religion, and family history of substance use which was similar to the study of Gaikwad AV et al and Baba TA et al.^[13,16]

In current study the prevalence of alcohol abuse was 30.0% among medical students which is almost similar to the study done by Rustagi N et al (28.8%) and higher than the study done by Bhagavati S et al where the 21.4% adolescents consumed alcohol.^[17-18]

In the present study the prevalence of cigarette smoking was 19.3% which is similar to the study done by Bhagavati S et al where the 20.3% adolescents consumed tobacco and slight higher than the study done by Dattatraya Dinna Bant et al.^[18-19]

In the present study, the most common sources of acquiring substances were buying from shops (68%) followed by getting from friends (30%) which is similar to the study done by Baba TA et al.^[18]

The present study found that the major reason for substance abuse was occasion celebration (22.8%) followed by pleasure (21.1%), Psychological stress (17.5%) and Peer pressure (17.5%) almost similar to the study of Gaikwad AV et al in which major reason for substance abuse was peer pressure followed by special occasion, stress and curiosity.^[13]

CONCLUSION:

Based on the findings of the current study, it is concluded that the trend of substance abuse among medical students is significantly rising from their admission to completion of course in both the genders and in currently residing in hostels. A family history of substance use was strongly associated with developing substance abuse in students.

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