

## **Socio-Demographic Correlates of Substance Abuse among College Students in a District of Assam**

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### **Abstract**

**Background:** Adolescence is a transitional stage of development and also carries great risks, one of which is substance abuse. Students are particularly vulnerable due to various reasons like academic pressure, temptation by peer groups and easy availability of many substances like tobacco, alcohol and other psychoactive drugs.

**Objective:** To find out prevalence of substance abuse among college students of Jorhat district, Assam, and to determine the socio-demographic factors associated with substance abuse.

**Materials and methods:** An institution based cross-sectional study was conducted among 632 undergraduate colleges students in Jorhat district of Assam. A pretested questionnaire in the form of Google form was used to collect data. Statistical analysis was performed.

**Results:** Substance abuse was present in 36.71% students, with maximum prevalence in age 21-23 years (81.81%). Substance abuse was most among engineering students (57.14%), students of educated parents, those from nuclear families (44.74%) and having a family history of substance use (46.97%). 59.09% had started using substances above 19 years age and 69.70% tried to

stop using substances. Alcohol (89.22%) and tobacco (68.10%) were the most abused.

**Conclusion:** There is alarming prevalence of substance abuse among the college students and most develop substance abuse in their late adolescence. Widespread availability alcohol and tobacco products along with experimentation and peer pressure might be instrumental in initiating substance abuse. Parents should be educated on discouragement of substance use and adolescent counseling sessions might be helpful.

**Keywords:** Substance abuse, college students, prevalence.

### **Introduction**

Adolescence is a transitional stage of physical and psychological human development that generally occurs during the period from puberty to adulthood. It offers opportunities for growth in competence, autonomy, self-esteem and intimacy<sup>1</sup>. However, it also carries great risks and drug abuse is one of the risks experienced by adolescents. The risk factors for drug abuse by adolescents may be biological predisposition to drug abuse, personality traits that reflect a lack of social bonding, a low socio-economic status of family, family bonding, family relationship and parental guidance and

care, a history of being abused or neglected, low emotional or psychiatric problems, stress and inadequate coping skills and social support, association with drug-using peers, rejection by peers due to poor communication skills, poor academic skills, failure in school, a history of anti-social behavior and delinquency<sup>1</sup>.

Among the adolescents, students are particularly vulnerable due to various reasons like academic pressure, temptation by peer groups, the lure of popularity and identification and easy availability of many such substances like tobacco (cigarettes) and other psychoactive drugs<sup>2</sup>.

Substance abuse disorder is among the leading public health problems in modern day world as they cause enormous human suffering in terms of morbidity, mortality and economic loss; and threatens the very social fabric of almost all communities around the world and as such is a great threat to the global health, economy and peace<sup>3</sup>.

Psychological behavior changes associated with substance abuse may be mood disorder such as depression, anxiety, thought disorders such schizophrenia as well as personality disorder like antisocial personality traits. In adolescence it is a major problem defining the future of the youth in both developed in developing countries<sup>1</sup>.

In the United Nations Sustainable Development Goals SDGs, Goal-3 (Target-5) narrates that “Strengthen the prevention and treatment of substance abuse, including narcotic drug abuse and harmful use of alcohol.”

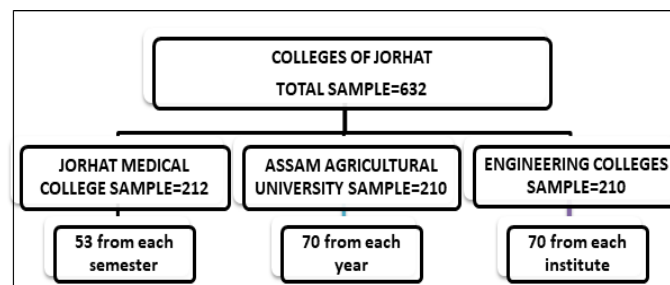
The present study was undertaken with an objective to find out prevalence of substance abuse among college students and correlate it with the socio-demographic characteristics of the study participants.

## Materials and Methods

A simple cross-sectional design was adopted for the present work. According to World Health Organization (WHO), substance abuse is defined as, “Persistent or sporadic use of a drug inconsistent with or unrelated to acceptable medical practice”.

It was an institution based cross-sectional study conducted among undergraduate students in different technical colleges of Jorhat district of Assam.

Technical institutions were purposively picked and students from five institutions were selected as study subjects.



Sample size was determined as 625. It was calculated taking  $p$  as 0.32<sup>3</sup>, relative error 12% of  $p$ , and 12% non-response.

Consecutive sampling method was used for the selection of students and only willing students were included in the study. Our total sample size was 632.

The students of the selected Institutes were contacted using various social media platforms such as, WhatsApp and Instagram.

A pretested, self-administered questionnaire with questions on the socio-demographic characteristics of the participants and their practice of drug abuse was prepared and linguistic validation of the questionnaire was done. Finally it was converted to Google forms. The Google form was to be filled anonymously and willingness to fill the form was considered as implied consent.

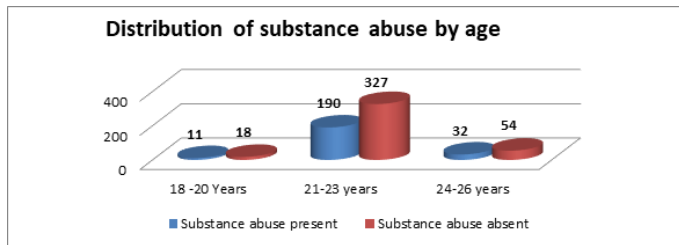
Permission was obtained from Institutional Ethics Committee of Jorhat Medical College.

The data obtained were compiled in Microsoft excel and the results were tabulated. Significance of intergroup association were made by Chi-square analysis.

**Results**

In the present study, most (81.81%) of the study participants belonged to the age group 21-23 years, while 13.64% belonged to the 24-26 years age group and only 4.55% belonged to the age group 18-20 years. The median age was found to be 21.24 years.

Further, substance abuse was found to be present in 36.71% of the students, with 81.81% students in age group 21-23 years practicing substance abuse.



Graph 1:

Table 1: age distribution of study participants

Age in years	Total		Substance abuse present		Median Age
	Frequency	%	Frequency	%	
18 -20 Years	29	4.55	11	4.55	21.24 years
21-23 years	517	81.81	190	81.81	
24-26 years	86	13.64	32	13.64	
Total	632	100	232	36.71	

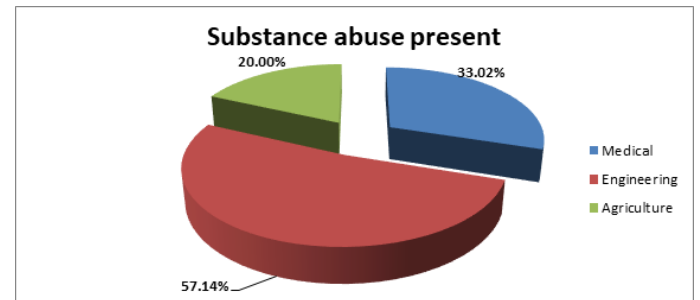
Table 2: Statistiyal correlation of substance abuse with socio- demographic profile.

Characteristics of participants	Response	Substance abuse present		Substance abuse absent		Total	p-value
		No.	%	No.	%		
Age In years	18 -20 Years	11	37.93	18	62.07	29	.989332 Not significant
	21-23 years	190	36.75	327	63.25	517	
	24-26 years	32	37.21	54	62.79	86	

A total of 36.71% college students admitted having abused any substance. The proportion of substance abuse almost equally distributed through the age groups, and age was not found to be significantly associated with substance abuse.

Substance abuse was more among the engineering students, with 57.14% of them practicing substance abuse as compared to 33.02% among medical students and 20.00% among agriculture students.

The difference in the prevalence of substance abuse among the different disciplines was also statistically significant (p<0.00001).



Graph 2:

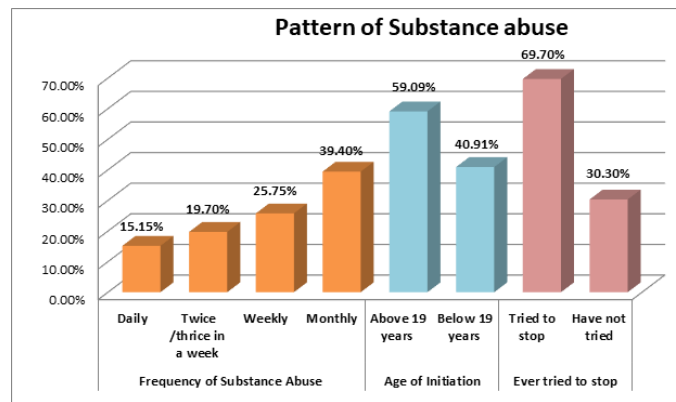
Substance abuse was found to be more among the students whose parents were either postgraduates or graduates. The difference in the prevalence of substance abuse among the students according to parents' educational status was also statistically significant (p<0.00001).

Maximum substance abuse was found in students from nuclear families (44.74%) with much less prevalence in the joint families (15.91%).

Discipline	Medical	70	33.02	142	66.98	212	<0.00001 Significant
	Engineering	120	57.14	90	42.86	210	
	Agriculture	42	20.00	168	80.00	210	
Education of Father	Illiterate	7	35.00	13	65.00	20	<0.00001 Significant
	Primary	4	7.84	47	92.16	51	
	High school	11	18.03	50	81.97	61	
	Intermediate	21	34.43	40	65.57	61	
	Graduate	134	39.30	207	60.70	341	
	PG/others	56	57.73	41	42.27	97	
Education of Mother	Illiterate	4	12.90	27	87.10	31	<0.00001 Significant
	Primary	7	22.58	24	77.42	31	
	High school	21	12.88	142	87.12	163	
	Intermediate	42	59.15	29	40.85	71	
	Graduation	123	47.31	137	52.69	260	
	PG/Others	35	46.05	41	53.95	76	
Type of family	Nuclear family	204	44.74	252	55.26	456	<0.00001 Significant
	Joint family	28	15.91	148	84.09	176	
Total		232	36.71	400	63.29	632	

A familial history of substance use was present among all the participants who practiced substance abuse, with 46.97% reporting substance abuse being present in a near family member; 33.33% reported the father alone practicing substance abuse, in 18.18% both parents and mother alone in 1.52%.

39.40% of the participants used it once monthly, 25.75% once weekly, 19.70% twice or thrice in a week while 15.15% daily. 59.09% reported that they had started using substances at ages more than 19 years while 40.91% had started at lesser than 19 years of age. 69.70% said they had tried to stop using substances at some time or the other.



Graph 3:

Table 3: characteristics of substance abuse pattern.

Characteristics of participants	Response	Frequency	%
Substance Abuse By Family Members	Father	77	33.33
	Mother	4	1.52
	Both	42	18.18
	Near family	109	46.97

	member		
Frequency of Substance Abuse	Daily	35	15.15
	Twice /thrice in a week	46	19.70
	Weekly	60	25.75
	Monthly	91	39.40
Age of Initiation	Above 19 years	137	59.09
	Below 19 years	95	40.91
Ever tried to stop	Yes	162	69.70
	No	191	30.30

followed by tobacco smoking (68.10%), pan masala or betel nut (39.22%) and ganja (30.17%) with only 6.47% abusing opiates. Among medical students maximum abuse was of alcohol (75.71%) and tobacco (70.0%). Among the engineering students, alcohol was the substance of abuse in 93.33% followed by 64.17% abusing tobacco, 38.33% abusing pan masala or betel nut and 35.0% ganja. Among the agriculture students, alcohol was abused by 100% of the substance abusers, followed by 76.19% each abusing tobacco and pan masala or betel nut. The difference in the preference of the substance of abuse among the students was statistically significant (p.003949).

Regarding the prevalence of different substances abused it was found that alcohol abuse was maximum (89.22%)

Table 4: prevalence rate of different substacnes of ABUSE ACCORDING TO DISCIPLINE (Multiple Responses)

Substance of abuse	Medical		Engineering		Agriculture		Total		p-value
	No.	%	No.	%	No.	%	No.	%	
Tobacco smoking (cigarette/bidi)	49	70.00	77	64.17	32	76.19	158	68.10	.003949 Significant
Alcohol	53	75.71	112	93.33	42	100.00	207	89.22	
Cannabis(ganja)	11	15.71	42	35.00	17	40.48	70	30.17	
Opiates(heroine/morphine)	1	1.43	7	5.83	7	16.67	15	6.47	
Pan masala/betel nut	13	18.57	46	38.33	32	76.19	91	39.22	
Total	70	100.00	120	100.00	42	100.00	232	100.00	

**Discussion**

Substance abuse has emerged in epidemic proportion in the society involving adolescents, adults and people in all other age groups. There are various factors which contribute into the indulgence into substance abuse, and while some of the factors vary from place to place, time to time and person to person, many remain universal throughout the world.

In the present study, substance abuse was found to be present in 36.71% of the students, with 81.81% students

in age group 21-23 years practicing substance abuse. Similar findings were reported by Raphael L et al.,<sup>6</sup> with 31.8% students abusing any one of the substances (alcohol, smoking, pan chewing, narcotics), by Tufel Baba<sup>3</sup>, et. al. with overall prevalence of substance abuse 31.3%. and by Sohrab Gupta et al. where maximum usage of substance (60%) was observed in the age group of 19-21 years.<sup>5</sup> Curiosity & peer pressure is also reported to be much increased among college students who are in their late adolescence.

Substance abuse was more among the engineering students, with 57.14% of them practicing substance abuse as compared to 33.02% among medical students and 20.00% among agriculture students. The finding of our study is similar to that of the study carried out in Chandigarh by Sohrab Gupta et al. where prevalence of substance abuse among medical students is comparatively lower than that of engineering students,<sup>5</sup> however they had not studied about agriculture students. A large number of studies have been done on medical students and they have shown high prevalence rates of substance use among them.<sup>7,8</sup> Academic stress, peer pressure, failure in love matters also accounted for initiation among majority of abusers.<sup>9</sup> Increasing tensions in life and adopting changing life styles under peer pressure compelled young students to search for solutions for reducing psychological stress. Also, easy availability and social acceptability of drinking to some extent, gave them an option whether right or wrong.<sup>5</sup>

The difference in the prevalence of substance abuse among the different disciplines was also found to be statistically significant in the present study.

Substance abuse was more among the students whose parents were either postgraduates or graduates. Similar findings were by Raphael L et al from a study carried out in Central Kerala, where prevalence of substance abuse was higher among the students whose parents had college education.<sup>6</sup> In contrast, a study by Sohrab Gupta et al. in Chandigarh reported substance abuse to be more among students whose parents had lower literacy rates.<sup>5</sup> In the present study, the difference in the prevalence of substance abuse among the students according to parents' educational status was also statistically significant. Higher qualification in the parents probably meant greater earning capacity and planned family size leading

to less quality time for child care and easier access to money and material to the adolescents.

According to the findings of the present study, substance abuse was more in students from nuclear families with much less prevalence in the joint families. This finding is similar to the finding of Sohrab Gupta et al. in Chandigarh where it points towards higher substance abuse among students who belong to nuclear families<sup>5</sup>. In contrast, the study by Tufael Baba found prevalence was higher in students from joint families<sup>3</sup>. The probable reason for higher prevalence in nuclear families could be due to inability of parents to monitor the activities of their children and share time with them.

A familial history of substance use was present among all the participants who practiced substance abuse, with 46.97% reporting substance abuse being present in a near family member while 33.33% reported the father alone practicing substance abuse, in 18.18% both parents and mother alone in 1.52%. The findings of our study are similar to study carried out in Chandigarh by Sorab Gupta L et al. where substance abuse is found to be higher among the students who had family members abusing any form of substance. This could be due to direct influence of substance abuse by the parent or another family member, easier availability and also inability of the guardians to provide proper guidance.<sup>5</sup> In the same study, use of substances by the father among the student substance abusers was reported in 72% cases.<sup>5</sup>

In the present study, 39.40% of the participants used it once monthly, 25.75 once weekly, 19.70% twice or thrice in a week while 15.15% daily. 59.09% reported that they had started using substances at ages more than 19 years while 40.91% had started at less than 19 years of age. 69.70% said they had tried to stop using substances at some time or the other. Similar findings had been reported by Raphael L et al. They had reported that 12.7%

consumed alcohol only during social functions, 5.7% consumed only once in their lifetime, 4.2% once monthly and only 1.7% daily, while 35.3% smoked daily and another 18.5% weekly.<sup>6</sup>

Regarding the prevalence of different substances abused it was found that alcohol abuse was maximum (89.22%) followed by tobacco smoking (68.10%), pan masala or betel nut (39.22%) and ganja (30.17%) with only 6.47% abusing opiates. Alcohol abuse was maximum among all the groups of students, with 75.71% among medical students, 93.33% in the engineering students and 100% among the agriculture students. Tobacco was the next popular substance of abuse among all the groups.

This finding of our study of alcohol being the most abused substance followed by smoking is similar to the study by Sorab Gupta et al. in Chandigarh (53.5% and 27.3% respectively). In contrast, Tufael Baba<sup>3</sup> and Raphael L et al<sup>6</sup> had found tobacco to be the predominant substance of abuse.

The prevalence of the abuse of alcohol could be due to easy availability, affordability and popularity among the family members and peers. Moreover, Assam has numerous forms of indigenous alcohol preparations with alcohol being accepted traditionally in large number of tribal communities. The difference in the preference of the substance of abuse among the students was found to be statistically significant.

#### **Limitations of the Study**

Substance abuse being a sensitive issue, false information may be given by the sampled population. We have collected data only from the people who were accessible through social media platforms and so, we may have missed some more vulnerable individuals. Further, Google forms can be used only by people who have smart phones and access to internet.

#### **Conclusion**

There is alarming prevalence of substance abuse among the college students and most of them pick substance abuse in their late adolescence. Widespread availability alcohol and tobacco products along with experimentation and peer pressure might be instrumental in initiating substance abuse. It was seen that many had tried to stop substance abuse. As the role of family and school is pivotal in eliminating this habit, parents should be educated on discouragement of substance use and on taking proper care of their children. Adolescent counseling sessions might help students to cope with stress, peer pressure and family issues and take proper preventive measures. Health education may be imparted in the school curriculum. The problem should be tackled as an utmost priority and as a public health problem.

#### **Recommendations**

The problem should be tackled as an utmost priority and as a public health problem. There is an utmost need to educate and counsel young students regarding harmful effects of substance use. Making adolescents aware of the risk related to substance abuse and reducing the exposure in them can drastically reduce the prevalence. Health education may be imparted in the school curriculum. More IEC activities are to be carried out to spread the knowledge about substance abuse and its prevention in the society. Adolescent clinics may be made the hub to provide a comprehensive package essential to treat and counsel adolescents involved in this evil. Efforts need to be directed to make students realize that experimental use of drugs may lead to abuse and dependence. Parents should also be educated on discouragement of substance use and on taking proper care of their children. Parents have to be accessible and open-minded, discuss peer pressure and most importantly practice what they preach. Intensive search for abusers should be carried out

regularly to trace all students abusing one or more substances. Some psychological strategies should also be attempted, for reducing the risk and potential loss of productive lives of young students and the society in general. Further large-scale studies are desirable, to find out factors which are responsible for increasing substance abuse among college students.

### **References**

1. Sharma Priyanka, Tyagi Ankita A study on Adolescent Drug Abuse in India, American International Journal of Research in Humanities, Arts and Social Sciences 16-244; 2016, 2328-3734,
2. Patel DR, Grey Danvs DE. Substance abuse: A paediatric concern. Indian J Pediatr. 1999;66(4):557-67.
3. Baba TA, Ganai AM, Qadri SS, Margoob MA, Iqbal QM, Khan ZA. An epidemiological study on substance abuse among college students of North India (Kashmir valley). Int J Med Sci Public Health 2013; 2:562-567.
4. World Health Organization, Health Topics; Sustainable Development Goals (SDGs). (www.who.int).
5. Gupta S, Sar pal SS, Kumar D et al. Prevalence, Pattern and Familial Effects of Substance Use Among the Male College Students: A North Indian Study. Journal of Clinical and Diagnostic Research. 2013; 7(8):1632-1636.
6. Raphael L, Raveendran R, Sanja MV. Prevalence and determinants of substance abuse among youth in Central Kerala, India. International Journal of Community Medicine and Public Health. 2017;4(3):747-751.
7. Kumar P, Basu D. Substance abuse by medical students and doctors. J Indian Med Assoc. 2000; 98:447-52.
8. Singh, G. Drug Abuse Among Medical Students-I. Prevalence of Pattern of Use. Indian Journal of Psychiatry.1979; 21: 332-38.

9. Kumar S, Niranjana A, Kumar M. Pattern of substance abuse among undergraduate medical students in Central India: a cross sectional institutional study. Int J Health Sci Res. 2016; 6(1):43-48.