

Alcohol and Drug use among Jaipur Based Engineering Students: A Questionnaire Based Observational Study

Girish R Shavi¹, Pankaj Chaudhary², Mayank Agrawal³, Preyas Joshi⁴, Mohsin Khan⁴, Rakesh Kumar Bhaskar⁵

¹Head, Department of Public Health Dentistry, Rajasthan Dental College and Hospital, Jaipur, Rajasthan, India, ²Postgraduate Student, Department of Public Health Dentistry, Rajasthan Dental College and Hospital, Jaipur, Rajasthan, India, ³Assistant Professor, Department of Public Health Dentistry, Rajasthan Dental College and Hospital, Jaipur, Rajasthan, India, ⁴Second Year Postgraduate, Department of Public Health Dentistry, Rajasthan Dental College and Hospital, Jaipur, Rajasthan, India, ⁵Third Year Postgraduate, Department of Orthodontics, AECS Maruthi Dental College, Bengaluru, Karnataka, India

ABSTRACT

Background: A growing body of research has focused on the rise in alcohol and drug use by college students. Among college students, heavy alcohol consumption is also associated with an increased likelihood of use of licit and illicit drugs. The aim of this study was to determine the prevalence and frequency of use of tobacco, alcohol, and other illicit drugs use among the engineering students of Jaipur city.

Materials and Methods: This was a questionnaire-based observational cross-sectional type of study comprising of 449 engineering students from Jaipur city. Data were collected by a questionnaire administered in 2 randomly selected engineering colleges of Jaipur city. A self-administered questionnaire was designed which collected data on year of study, gender, the use of tobacco, alcohol, cannabis, and other illicit drugs including inhalants among the college students.

Results: Nearly, 23% of the students reported smoking of tobacco. About 34% and 20.48% reported sensible and binge level of alcohol drinking, respectively. The percentage of students who used ecstasy, lysergic acid diethylamide, and cocaine were nearly 1% each.

Conclusion: Nearly one-third of all students were involved in alcohol drinking and nearly one-fourth reported in smoking of tobacco. Therefore, it is the responsibility of the educators to make sure to spread knowledge regarding substances abuse among the college students.

Key words: Alcoholism, Cannabis, Illicit drugs, Substance abuse, Tobacco

INTRODUCTION

Substance abuse is defined as a maladaptive pattern of substance use leading to clinically significant impairment or distress, wherein the person may also suffer from tolerance and withdrawal.¹ Adolescence and young adulthood are the times when people are most susceptible to starting tobacco and alcohol use.² In recent years, the consumption of illicit (tobacco, alcohol), as well as illicit substances, has increased greatly throughout the world.³ Drug use has been an integral part of any culture which affects individual, their families, and the society. The epidemic of drug abuse among the youth has assumed alarming dimensions in India. Changing cultural values, increasing economic stress and dwindling supportive bonds are leading to initiation into substance use.⁴ The World Health

Organization has estimated that tobacco, alcohol, and illicit drugs together contributed to 12.4% of all deaths worldwide.⁵ Tobacco consumption and nicotine addiction are a major global concern, popularly known as the "brown epidemic."⁶ The use of Tobacco, which is known to be a dependence-producing substance causing serious physical illness, is so widespread as to constitute a major public health problem.⁷ The use of alcoholic drinks in moderate level by adults is considered as normal behavior in most of the countries but excessive use or dependence on alcohol is considered less social acceptable and acceptance of excessive drinking varies considerably in different countries. In India, alcohol use figures vary widely from 3.8% to 21.0%, with men 9.7 times more likely to regularly use alcohol as compared to women. Prevalence of smoking has been estimated as 26.0% in males and 4.0% in females. For

CORRESPONDING AUTHOR:

Dr. Pankaj Chaudhary,
Postgraduate Student, Department of Public Health Dentistry, Rajasthan Dental College and Hospital, Jaipur,
Rajasthan, India. Phone: +91-9413343769.
E-mail: pankaj_singh85@hotmail.com

Submission: 04-2015; Peer Review: 05-2015; Acceptance: 06-2015; Publication: 06-2015;

youth, the prevalence is 19.0% and 8.3%, respectively.⁸ June 26 is celebrated as International Day against Drug Abuse and Illicit Trafficking every year. It is an exercise undertaken by the world community to sensitize the people in general and the youth in particular, to the menace of drugs.⁹ Substance use among college and university students remains an important area of research due to the implications of early substance dependence on the future of the youth.¹⁰ Among college students, heavy alcohol consumption is also associated with increased likelihood of use of licit and illicit drugs.¹¹ College duration is a sensitive and critical period because substance use could be seen, especially among students under academic pressure, peer group effects, popularity, and easy access to common substances.¹²

This study was conducted to estimate the prevalence of alcohol, tobacco, and drug usage among two engineering Colleges of Jaipur city.

MATERIALS AND METHODS

It was a cross-sectional, descriptive type of study, which collected data by using a questionnaire. A total of 450 participants were selected by systematic random sampling method from 2 engineering colleges of Jaipur city. A preformed, pre-tested questionnaire which collected data on basic demographics (age), year of study and the use of alcohol, and other drugs was used to collect the data. The questionnaire was distributed among the 1st-4th year students before the commencement of the lectures ($n = 449$) studying in two engineering colleges of Jaipur city. An 1 questionnaire returned was incomplete so was not included in the study. Questions were closed ended in Standard English making them easily answered. The length of the questionnaire was kept as short as possible allowing completion early.

The questionnaire was administered over a 2 week period from the 25th March to the 5th April 2014.

Inclusion criteria: Subjects who were present at the day of the survey.

Exclusion criteria: Subjects who were not willing to participate in the study.

Permission and ethical clearance were taken from the concerned authorities of the engineering colleges. Since it was a questionnaire-based study and no invasive procedure was carried out, therefore, verbal consent was taken from the participants.

The anonymity of participants was essential and, therefore, no name or ethnic group was requested. Confidentiality was strictly maintained with all completed questionnaires being seen exclusively by the survey organizer.

The results were analyzed using IBM statistical package for the social science software version 20. Descriptive statistics (mean, standard deviation, and proportion) were used to describe the study variables.

RESULTS

The study was conducted in 2 engineering colleges of Jaipur city ($n = 449$). The number of students in 1st year was 59 (male = 44, female = 15), 2nd year was 154 (male = 101, female = 53), 3rd year was 183 (male = 116, female = 67), and 4th year was 53 (male = 23, female = 30). In the present study, it is evident that among 1st year students (Figure 1) 18.61% of the subjects used to smoke

tobacco, and nearly 8.50% used smokeless tobacco. About one-fourth of the participants consumed alcohol. About 22.01% of the subjects consumed alcohol at a sensible level, and 23.73% of the subjects were involved in binge drinking. Among the sensible level drinkers nearly 10% had used alcohol for more than 3 times till date and nearly 10% were current users of alcohol. The Cannabis users were nearly 8.45% among the 1st years.

Among the 2nd year, (Figure 2) subjects 22.71% of the students smoked tobacco and 5.61% consumed smokeless tobacco, and nearly one-fourth of the participants consumed alcohol. The percentage of the participants consuming alcohol at sensible level was nearly 35.05%, and binge drinking was seen in 14.91% of the participants. About 13.63% of the sensible level drinkers had consumed alcohol more than 3 times till date and 10.38% had consumed 1-3 times. About 11.02% of the subjects used Cannabis.

In 3rd year students (Figure 3), the percentage of consumption of smoking tobacco (24.03%) was higher than the smokeless tobacco (7.08%). Alcohol consumption was evident in one-fourth of the subjects. The alcohol consumption at sensible level was seen in 34.39% and binge drinking in 20.74% of the participants. Among the sensible level drinkers, 16.93% were current regular users and 10.92% of the students consumed alcohol at binge level more than 3 times till date. Cannabis users were 14.19% (highest among all the years).

In the 4th years subject (Figure 4), the percentage of smoking tobacco and smokeless tobacco users were 24.51% and 2%, respectively. Nearly, one-third of the students consumed alcohol. Nearly, 41.51% of the students consumed alcohol at a sensible level and about 32.06% did binge drinking. Approximately 15.09% of the students consumed alcohol at sensible more than 3 times till date, and 13.20% did binge drinking more than 3 times till date. The use of Cannabis was seen in 9.42% of the students.

Table 1 shows that there is a gradual increase in the percentage of alcohol, tobacco, and other drugs use from first to final year students due to several reasons such as peer pressure, academic stress, curiosity to be the most common reasons.

DISCUSSION

The results of this survey reflect alcohol & drug use among engineering students of 2 colleges of Jaipur city.

Honesty of responses is difficult to access, as with all self-reported surveys, but discussions with participants after the survey suggested truthful responses had been reported with methods used to maintain anonymity being appreciated. As the anonymity of participants was essential so therefore no name or ethnic group was recorded.

Substance abuse has been recognized as an area of concern among college going students. The main aim of the study was to find out the use of alcohol, tobacco, cannabis, and other illicit drugs by the engineering students in Jaipur.

In the present study, a high amount which is nearly 95% of the subjects had experimented with alcohol, tobacco or other illicit drug which is contrary to the studies done by Padhy *et al.*¹³ in the year 2011 where the prevalence of substance abuse was 45.87%, Imran *et al.*¹⁴ in the year 2011 among medical students of a public and a private Medical University in Lahore where only 17% of the respondents had experimented with illicit drugs,

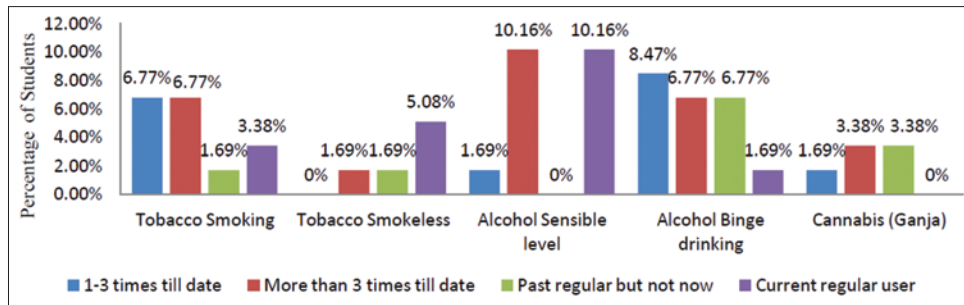


Figure 1: Prevalence of alcohol, tobacco, and drug use among 1st year students

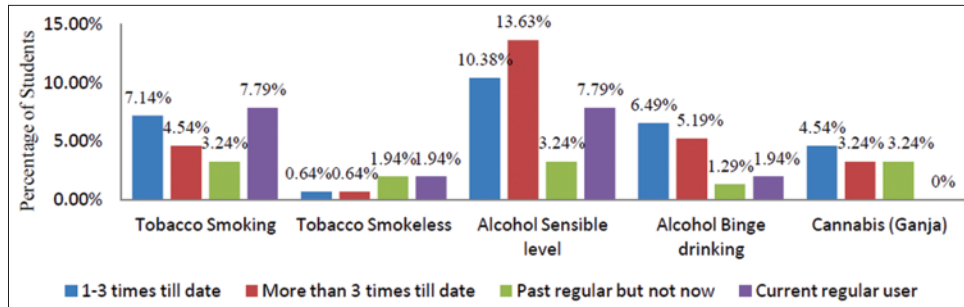


Figure 2: Prevalence of alcohol, tobacco, and drug use among 2nd year students

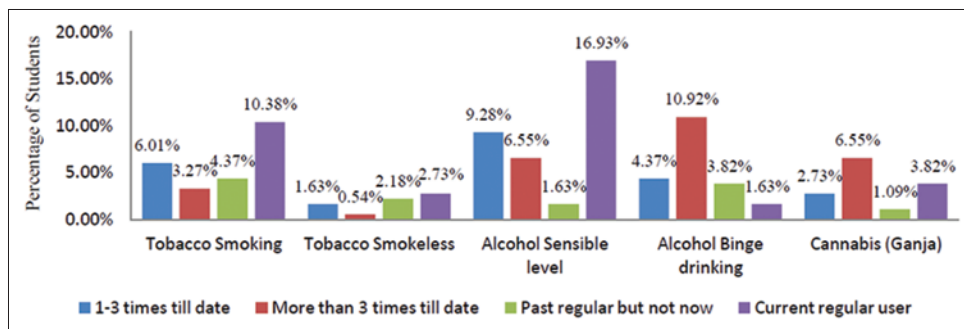


Figure 3: Prevalence of alcohol, tobacco, and drug use among 3rd year students

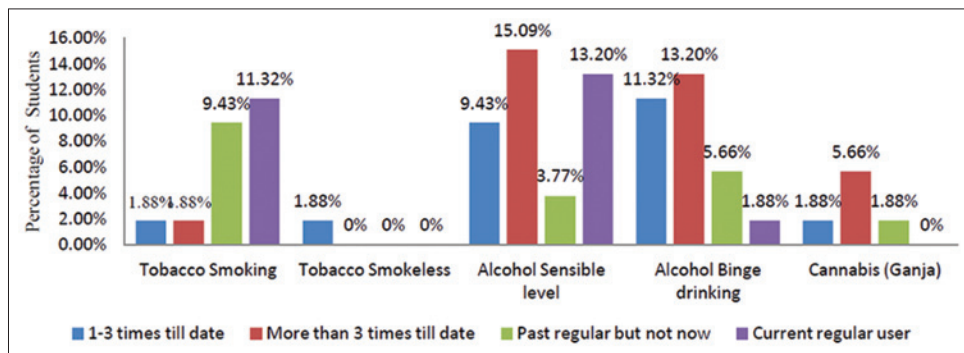


Figure 4: Prevalence of alcohol, tobacco, and drug use among 4th year students

alcohol, and tobacco and the study done by Akvardar *et al.*¹⁵ in the year 2003 among Turkish Medical students showed 4% of the subjects used the substances such as cannabis, ecstasy, and cocaine.

In this study, nearly 8.68% of the subjects were current smokers, which was similar when compared to the studies

done by Mangus *et al.*¹⁶ in the year 1998 and Webb *et al.*¹⁷ in 1998 in western world in which only 2%-15.8% of the medical students were reported to be the current smokers, whereas 21% of students were current tobacco smokers in the study was done by Gignon *et al.*¹⁸ in the year 2015 among 255 second to 6th year medical students.

Table 1: The percentage of alcohol, tobacco, and drug use among 1st-4th year students

Variables	Never (%)	1-3 times till date (%)	More than 3 times till date (%)	Past regular but not now (%)	Current regular user (%)
1 st year					
Tobacco smoking	81.35	6.77	6.77	1.69	3.38
Tobacco smokeless	91.52	0	1.69	1.69	5.08
Alcohol sensible level	77.96	1.69	10.16	0	10.16
Alcohol binge drinking	76.27	8.47	6.77	6.77	1.69
Cannabis (Ganja)	91.52	1.69	3.38	3.38	0
2 nd year					
Tobacco smoking	77.27	7.14	4.54	3.24	7.79
Tobacco smokeless	94.80	0.64	0.64	1.94	1.94
Alcohol sensible level	64.93	10.38	13.63	3.24	7.79
Alcohol binge drinking	85.06	6.49	5.19	1.29	1.94
Cannabis (Ganja)	88.96	4.54	3.24	3.24	0
3 rd year					
Tobacco smoking	75.95	6.01	3.27	4.37	10.38
Tobacco smokeless	92.89	1.63	0.54	2.18	2.73
Alcohol sensible level	65.57	9.28	6.55	1.63	16.93
Alcohol binge drinking	78.14	4.37	10.92	3.82	1.63
Cannabis (Ganja)	85.79	2.73	6.55	1.09	3.82
4 th year					
Tobacco smoking	75.47	1.88	1.88	9.43	11.32
Tobacco smokeless	98.11	1.88	0	0	0
Alcohol sensible level	58.49	9.43	15.09	3.77	13.20
Alcohol binge drinking	67.92	11.32	13.20	5.66	1.88
Cannabis (Ganja)	90.56	1.88	5.66	1.88	0

In the present study, cannabis use by students was nearly 11.80% which was lower when compared to the study done by Webb *et al.*¹⁷ in the year 1996 among UK University students in which 23% of male and 16% of female were involved.

In our survey, nearly 23.73% of the subjects were involved in binge drinking, which is similar to the study done by Andrade *et al.*¹⁹ (21.8%) in the year 2012. The finding of binge drinking in the current study was higher when compared to the study done by Gignon *et al.*¹⁸ in the year 2015 among 255 second to 6th year medical students where it was 11%.

The use of other illicit drugs in our study is 1-7% among the students, which is lower when compared to the study done by Webb *et al.*¹⁷ in the year 1996 among 2nd year students often U.K universities where it was 13-18%.

In the present study, 6% of the subjects used smokeless tobacco, which is contrary to the study done by Padhy *et al.*¹³ where the prevalence was 24.8% and Evren *et al.*²⁰ where it was 50.5%.

In our study, 33.85% consumed alcohol in sensible level, nearly 6.90% used inhalants, 1.11% used ecstasy, 0.89% of the students were used lysergic acid diethylamide and 0.89% consumed cocaine.

CONCLUSION

Recognition of the risk of substance misuse should be explicitly included early in the course schedule of college students. Professional treatment programs should be comprehensive in

approach, and should not entirely focus on substance abuse issues but should also include the treatment of dejection, apprehension, situational depression, and sexual disorders.

REFERENCES

- Zaman M, Razzaq S, Hassan R, Qureshi J, Ijaz H, Hanif M, *et al.* Drug abuse among the students. Pak J Psychol Res 2015;01:41-7.
- Hassan HM, Mahmoud SS, Gatasha MK, Issa LF, Wahed AA, Kandil SM, *et al.* Tobacco smoking among students of al-ghad college for applied medical sciences for male in Riyadh, Saudi Arabia. Int J Biol Med Res 2014;5:4468-72.
- Juyal R, Bansal R, Kishore S, Negi KS, Chandra R, Semwal J. Substance use among intercollege students in district Dehradun. Indian J Community Med 2006;31:252-4.
- Nadeem A, Rubeena B, Agarwal VK, Piyush K. Substance abuse in India. Pravara Med Rev 2009;1:4-6.
- Bajwa HZ, Al-Turki AS, Dawas AM, Behbehani MQ, Al-Mutairi AM, Al-Mahmoud S, *et al.* Prevalence and factors associated with the use of illicit substances among male university students in Kuwait. Med Princ Pract 2013;22:458-63.
- Agrawal A, Lynskey MT. Tobacco and cannabis co-occurrence: Does route of administration matter? Drug Alcohol Depend 2009;99:240-7.
- Herity BA, Horgan JM, Bourke GJ, Davis KW. Tobacco, alcohol and other drug use among medical students. J Ir Med Assoc 1977;70:532-9.
- Goel N, Khandelwal V, Pandya K, Kotwal A. Alcohol and tobacco use among undergraduate and postgraduate medical students in India: A multicentric cross-sectional study. Cent Asian J Glob Health 2015;4. Doi: 10.5195/cajgh.2015.187
- Qadri S, Goel R, Singh J, Ahluwalia S, Pathak R, Bashir H. Prevalence and pattern of substance abuse among school children in Northern India: A rapid assessment study. Int J Med Sci Public Health 2013;2:273-82.
- Atwoli L, Munjia PA, Ndung'u MN, Kinoti KC, Ogot EM. Prevalence of substance use among college students in Eldoret, western Kenya. BMC Psychiatry 2011;11:34.

11. Pedrelli P, Bentley K, Vitali M, Clain AJ, Nyer M, Fava M, *et al.* Compulsive use of alcohol among college students. *Psychiatry Res* 2013;205:95-102.
12. Abbasi-Ghahramanloo A, Fotouhi A, Zeraati H, Rahimi-Movaghar A. Prescription drugs, alcohol, and illicit substance use and their correlations among medical sciences students in iran. *Int J High Risk Behav Addict* 2015;4:e21945.
13. Padhy GK, Das S, Sahu T, Parida S. Prevalence and causes of substance abuse among undergraduate medical college students. *Indan Med Gaz* 2014;08: 276-82.
14. Imran N, Haider II, Bhatti MR, Sohail A, Zafar M. Prevalence of psychoactive drug use among medical students in Lahore. *Annals* 2011;17:343-6.
15. Akvardar Y, Demiral Y, Ergör G, Ergör A, Bilici M, Akil Ozer O. Substance use in a sample of Turkish medical students. *Drug Alcohol Depend* 2003;72:117-21.
16. Mangus RS, Hawkins CE, Miller MJ. Tobacco and alcohol use among 1996 medical school graduates. *JAMA* 1998;280:1192-3, 1195.
17. Webb E, Ashton CH, Kelly P, Kamali F. An update on British medical student's lifestyles. *Med Educ* 1998;32:325-31.
18. Gignon M, Havet E, Ammirati C, Traullé S, Manaouil C, Balcaen T, *et al.* Alcohol, cigarette, and illegal substance consumption among medical students: A cross-sectional survey. *Workplace Health Saf* 2015;63:54-63.
19. Andrade AG, Duarte Pdo C, Barroso LP, Nishimura R, Alberghini DG, Oliveira LG. Use of alcohol and other drugs among Brazilian college students: Effects of gender and age. *Rev Bras Psiquiatr* 2012;34:294-305.
20. Evren C, Ogel K, Demirci AC, Evren B, Yavuz BG, Bozkurt M. Prevalence of lifetime tobacco, alcohol and drug use among 10th grade students in Istanbul. *BCP* 2014;24:201-10.

HOW TO CITE THIS ARTICLE:

Shavi GR, Chaudhary P, Agrawal M, Joshi P, Khan M, Bhaskar RK. Alcohol and Drug use among Jaipur Based Engineering Students: A Questionnaire Based Observational Study. *Int J Prevent Public Health Sci* 2015;1(1):9-13.