National Journal of Medical and Allied Sciences

[ISSN Online: 2319 – 6335, Print: 2393 – 9192|Original article |Open Access]

Website:-www.njmsonline.org

A STUDY ON SUBSTANCE ABUSE AMONG MALE UNDERGRADUATE STUDENTS OF MEDICAL COLLEGE, KANPUR

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ABSTRACT

Introduction: According to the 2009 Global Health Risks report, substance abuse is one of the top 20 factors for death and disability worldwide. Globally, there is an increasing trend for people to use multiple substances, either together or at different times, which is likely to further increase the risks. This study was undertaken to know out the prevalence of substance abuse among male undergraduate students and to find out any influencing factor.

Material & Methods: The cross-sectional study was conducted among male undergraduate students of G.S.V.M Medical College, Kanpur, Uttar Pradesh in 2015. Data was recorded in a pre-designed and pre-tested questionnaire and analyzed using standard statistical tools

Results: Nearly 40.5% of students accepted substance abuse. Peer pressure (41.97%) and anxiety or stress (37.03%) were the commonest reasons for initiation. Substance abuse by parents was found to be significantly associated with substance abuse by students ($P<.001$).

Conclusion: Substance abuse is prevalent among male medical undergraduates. Peer pressure followed by anxiety or stress were the commonest reasons for initiation. Substance abuse by parents increases the likelihood of substance abuse by students.

Keywords: Substance abuse; Undergraduate students; Alcoholic beverages; Peer pressure; Parents

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INTRODUCTION

According to the World Health Organization (WHO), substance abuse is persistent or sporadic drug use inconsistent with or unrelated to acceptable medical practice.(1) A significant hurdle to development gains worldwide is substance abuse and is one of the leading causes of preventable death.(2) According to the 2009 Global Health Risks report, substance abuse is one of the top 20 factors for death and disability worldwide.(3)Globally, there is an increasing trend for people to use multiple substances, either together or at different times, which is likely to further increase the risks. A particularly alarming fact is the progressive fall in the age of initiation. The most commonly abused substances are cigarettes, cannabis, cocaine and alcohol. Alcohol and other related problems are becoming a major public health concern. Various studies have used different substances and different definitions of substance abuse. This has lead to variations in the prevalence of substance abuse from one study to the other. However, the key finding is that the problem is spreading to all socioeconomic groups. An alarming fact is that the use of new and multiple substances for abuse has increased among the adolescents and the youth. Other than some local and regional reports, the prevalence data for substance abuse in India is not available. However, most of the studies show that the incidence is on a rise especially in the student population. Previous studies have shown association of substance abuse with factors like type of family, parental abuse status,

psychological factors (anxiety or stress, loneliness) etc. So in the current scenario, it is more important to examine these factors. Studies regarding substance abuse among medical students are rare. In a survey conducted by WHO among medical interns in 1982, it was found that 22.7% of males indulged in alcohol abuse at least once in a month. The previous studies have also highlighted the higher prevalence of substance abuse among males.[4] Hence the present study was focused on male undergraduate students of G.S.V.M Medical College, Kanpur to know the prevalence of substance abuse and to find out any influencing factor so that appropriate strategies can be developed for preventing and controlling the rising public health problem.

MATERIAL & METHODS

This cross-sectional study was conducted among male undergraduate students of G.S.V.M Medical College, Kanpur, and Uttar Pradesh in the month of August, 2015. Ethical clearance was obtained from the Institutional Ethical Committee prior to the conduction of the study. Prevalence of substance abuse was assumed to be 46.9%.[5] Sample size was calculated considering 10% non-response rate and 5% absolute error using the following formula: $N= Z^2pq/d^2$, where p= prevalence, q= (100-p), d= absolute error**.** The final sample size came out to be 200. Students of 1st year, 2nd year and 3rd year attending classes in the Department were included in the study.

A pre-designed and pre-tested questionnaire was administered to the students present in the class on the day of study. Only those students who were willing to participate and gave consent for the study were included. Data was recorded on the basis of anonymity. The classification of substances abused was according to WHO.[6]

Statistical analysis: The Master table was prepared from the data collected using MS Excel software and analyzed using SPSS software version 16.0. Standard statistical tools (percentages, chi square test for independence of attributes, multinomial logistic regression) were used for analysis and conclusions were drawn accordingly.

RESULTS

Nearly 40.5% of the students accepted substance abuse **[Table 1]**. Alcoholic beverages (69.13%) followed by cigarettes (65.43%) were the most commonly abused substances **[Figure 1]**.

Table 1: Distribution of Study Subjects According To Substance Abuse (N=200)

Substance abuse	Study subjects	%
Yes	119	59.5
No	81	40.5
Total	200	100

Figure 1: Distribution of Study Subjects According to Type of Substance Abused (N=200)

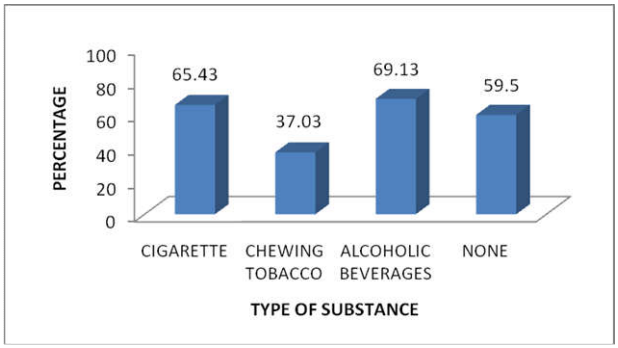

Figure 2: Distribution of Substance Abusers According to Reason For Initiation (N=81)

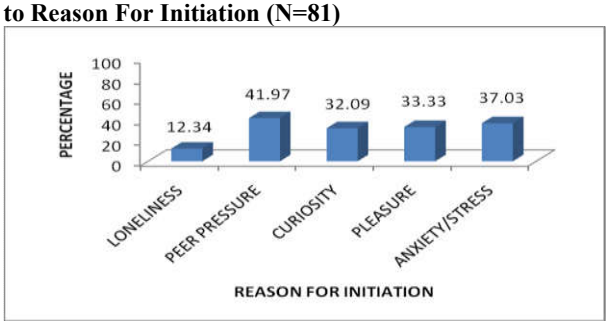

Table 2: Association between Biosocial Correlates and Substance Abuse (N=200)

Biosocial correlates	Substance abuse		Test of significance χ^2 C.I.=95%
	No (%) n=119	Yes (%) n=81	
Type of family			
Nuclear	61 (51.3)	43 (53.1)	χ^2= 165.28, df=3 *P*<.001
Joint	55 (46.2)	31 (38.3)	
Extended	1 (0.8)	5 (6.1)	
Broken	2 (1.7)	2 (2.5)	
Social class*			
I	31 (26.1)	8 (9.9)	χ^2= 19.89, df=4 *P*<.001
II	47 (39.5)	56 (69.1)	
III	27 (22.7)	13 (16.0)	
IV	2 (1.7)	2 (2.5)	
V	12 (10.0)	2 (2.5)	

***As per Modified B.G Prasad's classification**

Table 3 Association between Parent's Behavior and Substance Abuse (N=200)

Parent's behavior	Substance abuse		Test of significance χ^2 C.I.=95%, df=1
	No (%)	Yes (%)	
Both parents /One parent	15 (12.6)	33 (40.7)	χ^2= 19.4, *P*<.001
None	104 (87.4)	48(59.3)	
Total	119 (100)	81 (100)	

Peer pressure (41.97%) followed by anxiety or stress (37.03%) were the commonest reasons for initiation among substance abusers **[Figure 2]**.

Maximum number (53.1%) of substance abusers was from nuclear family and belonged to social class II (69.1%). Parents of 40.7% of substance abusers indulged in substance abuse. Substance abuse was significantly associated with social class, type of family and parent's behavior was found. **[Table 2 and 3]**.

Table 4: Multinomial Logistic Regression Analysis of the Categorical Variables

Categorical variable	*P* value	Odd's ratio	95% C.I for Odd's ratio	
			Lower bound	Upper bound
Type of family				
Reference				
(Broken)	.994	.992	.119	8.263
Nuclear	.572	.543	.066	4.498
Joint	.245	6.396	.280	145.918
Extended				
Social class				
Reference				
(Class V)	.736	.764	.160	3.639
Class I	.031	4.638		18.678
Class II	.816	1.202	1.152	5.663
Class III	.318	3.454	.255	39.412
Class IV			.303	
Parent's behavior				
Reference (None)	<.001	5.908	2.544	13.723
Both parents/One parent				

Multinomial logistic regression analysis of the categorical variables showed that substance abuse by study subject was significantly associated with social class (*P*=.031) and parent's behavior (*P*<.001) **[Table 4]**.

DISCUSSION

In the present study, the prevalence of substance abuse was found to be 40.5%. Similar trend was observed in the studies conducted among male adolescents by Saxena V *et al* in Dehradun and Sarangi L *et al* in Orissa where the prevalence of substance abuse was found to be 46.9% and 43.4% respectively.[5],[7] In the present study, alcoholic beverages (69.13%) followed by cigarettes (65.43%) were the most commonly abused substances. Similarly, in the studies conducted by Sarangi L *et al* in Orissa and Kokiwar PR *et al* in Andhra Pradesh, alcohol and tobacco products were the most commonly abused substances.[7],[8] This may be due to the easy accessibility and availability of alcohol and tobacco products. In the present study, the commonest reason for initiation of substance abuse was peer pressure (41.97%) followed by anxiety or stress (37.03%). Similarly, peer pressure was the most common factor for initiation of substance abuse (52.8%) in the studies conducted by Sarangi *et al* and Bansal *et al*.[7],[9] In the study conducted by Kokiwar PR *et al* also, the important reason for initiation of substance abuse was peer pressure in a significantly higher number of substance users, 52.9%.[8] In the present study, maximum number (53.1%) of substance abusers were from nuclear families. Similarly, in the study conducted by Saxena V *et al* higher number of substance abusers were from nuclear families (48.8%).[5] In our study, the association between substance abuse and type of family was statistically significant. In the study conducted by Sarangi L *et al* also, the association between type of family and substance abuse was found to be statistically significant.[7]In the present study, most (69.1%) of the substance abusers belonged to social class II. The study conducted by Saxena V *et al* also revealed that highest percentage of substance abusers (61.3%) were from upper social class families.[5] In a study conducted by Naskar *et al* in Calcutta, similar percentage of substance abusers were from business-class families (62.7%).[10] This might be due to higher amount of pocket money provided by parents of students from upper class families.In the present study, 40.7% of substance abusers had parents who indulged in

substance abuse. Similar trend was observed in the study conducted by Saxena V *et al* where 58.3% of the substance abusers had one of the family members who also indulged in substance abuse.[5] In our study, there was statistically significant association between parent's behavior and substance abuse by student. Similarly Kokiwar PR *et al* also reported that substance abuse by parents and peers was significantly associated with substance use.[8]Regression analysis of the categorical variables showed that the likelihood of substance abuse by student increases depending on social class and parent's behavior. Family type does not influence the likelihood of substance abuse by student. Similar finding was reported by other studies.[8],[11]

CONCLUSION

There is a need of creating supportive environment and to create awareness among medical students, so that they can decide and sustain with right choices for healthy life. Interactive and interesting sessions can be organized for medical students where they can learn about ways to deal with stress of daily life and channelize their energy in the positive direction. Students can in fact educate their parents regarding the harmful effects of substance abuse and help them in adopting a healthy lifestyle.

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Conflicts of Interest: None Funding: None

Citation: Nigam S, Debbarma S, Barman SK, Midha T. A Study on Substance Abuse Among Male Undergraduate Students Of Medical College, Kanpur. National Journal of Medical and Allied Sciences 2016; 5(2):76-79