

Original Research Article

Pattern of Substance Abuse among Undergraduate Medical Students in Central India: A Cross Sectional Institutional Study

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Received: 11/12/2015

Revised: 23/12/2015

Accepted: 28/12/2015

ABSTRACT

Introduction: Medical education has always been regarded as highly stressful. Although, only the academically-minded youth in the society tend to be selected for medical education, the stressful academic environment can exert a negative effect on the psychological and physical well-being of medical students.

Methods: Cross-sectional institutional study conducted among undergraduate medical college students of S.S. Medical College Rewa, Madhya Pradesh, India. Information collected with the semi-structured oral questionnaire after obtaining informed verbal consent. Data pertaining to the general information of the student (sex, residence, academic year, type of family, influence and role of family members) details of substance abuse (type, age of initiation, frequency) and attitude towards substance abuse. Data was analyzed using graphpad software.

Results: Out of total 267 students only 228 students (85.4%) responded. Out of total 228 students only 67 medical students were substances users. Male constituted 94.0%, whereas females were 6.0%. 28.3% substance abusers in interns. 88% were hostellers, 38.9% come from joint families, 29.9% having history of substance abuse in their siblings. Most common substances used were cigarettes (80.6%). 31.3% initiated substance used in school. 34.3% were Habitual user. In 58.2% perceived reason for substance use were celebrate some occasion. 74.6% did not feel any unwanted effects. 39 had made some attempts to quitting the substances, 61.5% knew ill effects on health. 41.1% had quitted by gradually decrease. 31 were failure to quit. 64.5% attributed their failures to lack of will power.

Conclusions: Continuing use of these substances in spite of knowledge of hazards associated with them reflected lack of health consciousness and need of proper health education.

Key words: Medical students, Substance abuse, Pattern, India.

INTRODUCTION

Substance use is defined as, "Persistent or sporadic drug use inconsistent with or unrelated to acceptable medical practice." In recent years substance use has increased greatly throughout the world. A particularly alarming fact is that the age of initiation into substance use is progressively falling.

^[1] Medical education has always been regarded as highly stressful. Although, only the academically-minded youth in the society tend to be selected for medical education, the stressful academic environment can exert a negative effect on the psychological and physical well-being of medical students. ^[2] Alcohol and illicit drug use is increasing amongst the young.

Research has revealed that some university students drink excessive amounts of alcohol and experiment with illicit drugs and medical students do not differ markedly from many other student groups, despite their greater knowledge of the potential hazards of alcohol and illicit drugs. [3] Substance abuse is also a growing problem in India. [4] Substance abuse assumes a special significance among the medical students as they are the future medical practitioners and have a potential role in treating and counselling the patients of substance abuse disorder. [5] Substance dependence is also showing rising trend all over world and these disorders rapidly recognized throughout in India. [6] Health professionals including medical students are said to be at higher risk of substance abuse because of relatively easy access to psychoactive substances, high levels of work related stress, frequent contact with illness and death, relative isolation of medical school and disrupted sleep and social life. [7] Medical students, as tomorrow's doctors, hold a unique place in society and have privileges and responsibilities different from those of other students. Different standards of professional behaviour are hence expected of them.

It is believed that substance use among physicians starts early in their careers and the importance of studying the lifestyles of medical students to detect substance abuse is well recognized. [8] The prevalence of substance abuse in medical students may be different with the general population. [9] Till date no study has been done to highlight the scenario of substance abuse among undergraduate medical student in this medical college. Therefore the researchers aimed, to gather information on the frequency and type of substance abuse, to study the pattern of substances abuse contributory factors and the attitude towards substance abuse among undergraduate medical students of Rewa Medical College.

MATERIALS & METHODS

The present cross-sectional study conducted among undergraduate medical college students of S.S. Medical College Rewa (M.P.) during 2015. A semi-structured questionnaire was prepared including general information of the student (sex, residence, academic year, type of family, influence and role of family members) details of substance abuse (type, age of initiation, frequency) and attitude towards substance abuse (Reasons for using, perceived ill effects, attempts to quit, reasons for attempt to quitting, method use for quitting and reasons for failure to quit).

The study was conducted in compliance with Ethical principles for medical research involving human subjects. Invasive procedure and active interventions was not done in the study and informed verbal consent was taken. They were assured that their responses would be kept anonymous and confidentiality maintained.

The questionnaire was distributed and then collected by the data collection team. All the students of S.S. Medical College in five years of MBBS attending the classes on days of data collection were invited to participate in the study. The questionnaire was administered to all the 267 students come to the class including 180 boys and 87 girls. Out of 267 only 228 students (85.4%) answered (156 Boys and 72 Girls).

Data was analyzed by using Statistical Package for Social Sciences 10.0 (SPSS 10.0). Descriptive statistics of socio-demographic information and frequency and pattern of substance use were determined. Chi square test was used to examine associations between substance use and various variables. For all purposes, a p value of <.05 was considered as a criteria of significance.

RESULTS

Out of total 267 students only 228 students (85.4%) responded. Out of total

228 students only 67 medical students used various types of substances. Male constituted 63 (94.0%), whereas females were 4 (6.0%) out of total substance abusers students. It is observed that the risk of substance abuse increased with an increase in seniority and 22.4% substance abusers in final-I MBBS students, 25.4% in final-II MBBS and 28.3% substance abusers in interns. Risk of Substance abuse was more among students who were staying in hostels (88.0%) than those who stay at home (12.0%). The risk was also found to be greater in students come from joint families (38.9%) and 29.9% students having history of substance abuse in their siblings. (Table-1)

Table 1-General information of substance abusers medical students (n=67)

General information of medical students	No.	%
Gender		
Male	63	94.0
Female	4	6.0
Academic year		
I st MBBS	6	9.0
II nd MBBS	10	14.9
Final-I MBBS	15	22.4
Final-II MBBS	17	25.4
Internship	19	28.3
Residence		
Hosteler	59	88.0
Dayschooler	8	12.0
Type of Family		
Nuclear	19	28.3
Joint	26	38.9
Three generation	22	32.8
History of substance abuse		
In Parents		
Present	16	23.9
Absent	51	76.1
In siblings		
Present	20	29.9
Absent	47	70.1

Table 2: Type of substance abuse among medical students (n=67)*

Substance	No.	%
Cigarettes	54	80.6
Alcohol	40	59.7
Gutkha/pan	7	10.4
Tobacco	5	7.5
Cannabis	9	13.4
Nasal snuff	2	3.0

*Multiple responses

Most common substances used by students were cigarettes (80.6%) and order of preference was cigarettes (80.6%), alcohol (59.7%), cannabis (13.4%),

gutkha/pan (10.4%), tobacco (7.5%), nasal snuff (3.0%). (Table-2)

Table 3-Distribution of substance abusers medical students according to Age of initiation, when initiated, frequency of substance abuse perceived reason for substance abuse and ill effects perceived of substance abuse(n=67)

Age of initiation (In years)	No.	%
0-10	4	6.0
11-20	24	35.8
21-30	39	58.2
When initiated		
In school	21	31.3
In college	46	68.7
Frequency of substance abuse		
Just to experiment	9	13.4
Occasional use	35	52.3
Habitual	23	34.3
Perceived reasons for substance abuse*		
Curiosity	16	23.9
Celebrate occasion	39	58.2
Company sake(Peer pressure)	5	7.5
Relieve tension	20	29.8
Escape boredom	10	14.9
To be sociable	12	17.9
Show off	7	10.4
Problem in family	5	7.5
Seeking pleasure	10	14.9
To improve performance	5	7.5
Depression	8	11.9
Ill effects perceived of substance abuse		
No ill effects	50	74.6
Problems in physical/mental health	8	11.9
Problems in academic performance	2	3.0
Problems in social relationships	5	7.5
Problems in family relationships	2	3.0

*Multiple responses

Most common age of initiation for substance abuse were 21-30 year (58.2%). 68.7% students initiated substance abuse when they were in college while 31.3% abusers had already started in the school. Among the 67 students who had experimented with these substances, majority had used occasionally (52.3%), followed by Habitual users (34.3%) and then those who used just to experiments (13.4%). The students perceived a variety of reasons for using these substances. The most common ones for celebrate some occasion (58.2%), for relieve tension (29.8%), for curiosity (23.9%) and To be sociable (17.9), Escape boredom (14.9%), Seeking pleasure (14.9%), Depression (11.9%). Some other perceived reasons were show off (10.4%), Company sake (7.5%), to improve performance (7.5%) and Problem in family (7.5%). Majority of the students (74.6%) did not feel that the

use of these substances would have any ill effects. 11.9 % Students felt problems in physical or mental health. Only less than 10% students faced problems in social relationships, problems in academic performance and problems in family relationships. (Table-3)

Out of 67 students 35 (52.3%) used substances occasionally, 23 (34.3%) had Habitual users and grouped as users. Out of 58 substance users majority 39 (67.2%) had made some attempts to quitting the use of these substances. They wanted to quit as majority of them knew ill effects on health (61.5%), did not enjoy (30.8%) and some were due to family pressure (20.5%) and cost (10.2%) of these substances. Majority of them (41.1%) had tried to quit the use by gradually decrease, 25.6% of them had just stopped, 20.5% of them had settled a date and 12.5% quitted along with friends. Out of 39, majority (31) were failure to quit. Most of them (64.5%) attributed their failures to 'lack of will power' than not sure how to quit (35.5%). (Table-4)

Table 4-Attempts at quitting the use of substances (n=58)

Attempts to quit	No.	%
Yes	39	67.2
No	19	32.8
Reasons for attempts to quitting (n=39) *		
Do not enjoy	12	30.8
Knows ill effects on health	24	61.5
Cost	4	10.2
Family pressure/Peer pressure	8	20.5
Methods used for quitting (n=39)		
Just stop	10	25.6
Gradual decrease	16	41.1
Set a date	8	20.5
Along with friend	5	12.8
Reasons for failure to quit (n=31)		
Lack of will power	20	64.5
Not sure how to quit	15	35.5
Withdrawal symptoms	00	00

*Multiple responses

DISCUSSION

In this study male constituted 94.0%, whereas females were 6.0% out of total substance abusers students. Study done by V.K. Jagnany et al. (2008) [5] reported that males have higher substance use rates than females. In present study revealed that the risk of substance abuse increased with an increase in seniority and

was 22.4% substance abusers in final-I MBBS students, 25.4% in final-II MBBS and 28.3% substance abusers in interns. V.K. Jagnany et al. (2008) [5] also reported that the risk of substance abuse increased with an increase in seniority. In this study Risk of Substance abuse was more among students who were staying in hostels (88.0%) than those who stay at home (12.0%). The risk was also found to be greater in students coming from joint families (38.9%) and in students having history of substance abuse in their siblings. Study done by Gour kumari Padhy et al (2014) [10] also reported that risk of substance abuse was more among hostellers and those coming from joint families. According to V.K. Jagnany et al (2008) [5] risk was also found to be greater in students having history of substance abuse in their siblings.

In our study most common substances used by students were cigarettes (80.6%) and order of preference was cigarettes (80.6%), alcohol (59.7%), cannabis (13.4%), gutkha/pan (10.4%), tobacco (7.5%), and nasal snuff (3.0%). Nazish Imran et al (2011) [7] revealed that most common substance used by students were cigarettes (78.9%), alcohol (26.2%) and least common glue sniffing (0.4%) difference from study done by EO Babalola et al (2014) [11] found that Alcohol was the most commonly used substance (63.4%). It may be explained on the basis of a perception among medical students of cigarette being helpful to remain awake and active and to improve the attention and concentration especially during exams and lack of awareness of its potential side effects.

Majority students (58.2%) had started to use substances between 21-30 year and 35.8% between 11-20 year. Study done by Nazish Imran et al (2011) [7] found that More than a quarter of respondents also had started experimenting with these substances before the age of 15 years with almost 40% between the ages of

15 – 20 years while EO Babalola et al (2014) [11] revealed that most of the drugs were first used between ages 15 and 18 years. Initial drug use was relatively uncommon below age 11 year, although substantial proportions of respondents had tried alcohol, tobacco and cannabis before their 15th birthday. In our study 31.3% of medical students had started substance abuse when they were in school but 68.7% have started when they come in medical college. This showed that medical college environment favoured for substance abuse. Gour Kumari Padhy et al (2014) [10] reported that 68% of substance abusers began their practice in college while 22% abusers had already started in the school. In this study 52.3% medical students occasionally use the substance and 34.3% Habitual user. The wide variation in frequency of substance abuse among medical students observed in study done by V.K. Jagnany et al. (2008) [5] and frequency observed in the present study may be attributed to differences in population characteristics, socio-cultural background and differences in study methodology. In present study celebrate some occasion was the most common perceived reason in 58.2% substance abuser, 29.8% for relieving tension and 23.9% were curious about the substance abuse but According to study done by Gour kumari Padhy et al (2014) [10] found that Curiosity about the substance was the cause of initiation for about 46% substance abusers. Academic stress, peer pressure, failure in love matters also accounted for initiation among majority of abusers. Majority of the students (74.6%) did not feel that the use of these substances would have any ill effects. Only less than 11.9% of the students thought that it can have ill effect on their physical/mental health and in less than 10% on family and social relationships. Similar result found the study done by V.K. Jagnany et al. (2008). [5]

Out of 58 substance users majority 67.2% had made some attempts at quitting the use of these substances. They wanted to quit as majority of them knew ill effects on health (61.5%), did not enjoy (30.8%) and some were due to family pressure (20.5%) and cost (10.2%) of these substances. Majority of them (41.1%) had tried to quit the use by gradually decrease, 25.6% of them had just stopped, 20.5% of them had settled a date and 12.5% quitted along with friends. Out of 39, majority (31) were failure to quit. Most of them (64.5%) attributed their failures to 'lack of will power' than not sure how to quit (35.5%). V.K. Jagnany et al. (2008) [5] found that 45.7 % students do not enjoy, 41.3 % due to ill effects on health, 26.1 % due to cost and 8.7% students due to family pressure attempts to quitting. Majority of them had tried to quit the use by suddenly stopping it without any guidance or medical help. They said the reason for failures to lack of willpower.

CONCLUSIONS

Continuing use of these substances in spite of knowledge of hazards associated with them reflected lack of health consciousness and need of proper health education. So, proper counselling with well planned policies should be implemented to root out the evil of substance abuse among the future doctors which will help in providing better health care services to the people. Intensive search for abusers should be carried out regularly to trace all students abusing one or more substances. Efforts need to be directed to increase awareness about the dangers of drug abuse and to make students realize that experimental use of drugs may lead to abuse and dependence.

Limitations: The study was done in one Institution so results may not be generalizable to all medical Institutes. We also cannot rule out differences in students' actual perceptions and how they have answered the questionnaire,

considering the sensitivity of the issue under study.

ACKNOWLEDGEMENT

The authors are thankful to the study subjects for their cooperation.

Source of Funding: None

Conflict of interest: authors not declare any Conflict of interest

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How to cite this article: Kumar S, Niranjan 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.
