



**ORIGINAL ARTICLE**

***A study of substance abuse among Medical students of a Medical College in Kolkata***

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**Abstract**

**Background:**

Substance abuse refers to the harmful or hazardous use of psychoactive substances, including alcohol and illicit drugs. The doctors are vulnerable to substance abuse due to their ready accessibility to the substance of abuse. Timely detection of substance abuse may help timely intervention and control of the social problems. The present study undertaken with the objectives to estimate prevalence of substance abuse and to find out some socio economic factors those may be associated to substance abuse.

**Material and Methods:**

A cross-sectional study was undertaken among medical students in a randomly selected Medical College in Kolkata. Attempt was made to cover all students on roll from first to final year during the study. Attempts were made to cover absentees. Data were analyzed and tabulated as and when necessary.

**Results:**

Complete information was available from a total of 800 students. The overall prevalence of substance use was found to be 57%. 2<sup>nd</sup> year students used drug much more

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(76%) than any other year. Tobacco (57.4%) was the mostly used substance followed by alcohol (27.3%) and cannabis (10.4%). Psycho-social stress (66%) was the main reason of substance abuse, followed by curiosity (39.2%). Friends (42%) were the main source of substance to the users.

**Conclusion:**

The study showed that substance abuse was common among medical students and abuse rate was more among higher year's students.

**Key words: Substance abuse, drug abuse, Medical Student, Medical College**

**Introduction:**

Substance abuse refers to the harmful or hazardous use of psychoactive substance including alcohol and illicit drugs.<sup>1</sup> Substance abuse assumes a special significance among the medical students as they are the future medical practitioners and have a potential roll in treating and counseling the patients of substance abuse disorder.<sup>2</sup>

Substance abuse disorders are among the world's leading public health problems in modern day world as they cause enormous human sufferings, in terms of morbidity mortality economic loss and threaten the very social fabric of almost all communities<sup>3</sup> around the world. Common psycho active drugs are tobacco, alcohol, cannabis, opioids, amphetamers, sedatives, tranquillizer and even analgesic.

It is estimated that a total of 246 million people or 1 out of 20 people between the ages of 15 to 64 years used an illicit drugs in 2013.<sup>4</sup>

Use of tobacco is the second major cause of death in the world. Each year, tobacco products kill some 5 million people worldwide<sup>5</sup> and this number is increasing. A study in Lucknow in 2008 revealed that 28.8% Medical students reported to abuse tobacco.<sup>5</sup> Goel et al, reported that 16.6% of UG students and 31.5% of PG students used alcohol. Use rate was more among male students than female.<sup>6</sup>

Study by Naskar et al on drug abuse among under-graduate medical students in Calcutta revealed that 48.9% of medical students used drugs.<sup>7</sup>

Though a number of studies had been done previously but the numbers are few and more study may be necessary to know the present status of Substance abuse among Medical professional. Number of studies on substance abuse has been conducted in the country, but very few were done among medical students to know the pattern and prevalence of substance abuse among this population group. Under these circumstances the present study was undertaken with the following objectives.

- 1) To know the prevalence and pattern of substance use by the medical students in a Medical College Kolkata
- 2) To identify some socio-economic factors which may be associated with substance abuse among the study population.

### **Methodology:**

A cross-sectional study was undertaken on substance abuse in the year 2015 among Medical students in Calcutta Medical College in Kolkata. Attempt was made to cover all students on Roll from 1<sup>st</sup> year to final year in the Medical College. There were 1000 students on Roll during the study. Attempt was made to cover all the students on roll. Incompletely filled questionnaire and unwilling candidates were excluded from the study. Repeated attempts were made to cover the absentees. 800 filled-up questionnaires were eligible for analysis.

Census method was applied for collection of data in the selected Medical College.

A standard WHO questionnaire<sup>8</sup> which was (modified in local context) used for the study. The anonymous questionnaire was distributed in the classroom to the students after taking proper permission from the authority. After explaining the student community about the objectives of the study and assuring confidentiality about their identity they were asked to fill the questionnaire and were asked to submit in a box placed in front of the classroom. A written consent was taken before for this study. The questionnaire included data on some socio-demographic information and the pattern of use some selected drugs or substance. Filled-up questionnaires were collected from all the willing candidates from 1<sup>st</sup> to 9<sup>th</sup> semester in the medical colleges during study. Repeated attempt was made to cover the absentees. A total of 800 questionnaires were eligible for analysis

Unwilling candidates and incompletely filled questionnaires were excluded from the study.

Data collected were tabulated and analyzed using % as and when necessary.

### **Results:**

Out of 1000 students on Roll in the survey, excluding the incompletely filled questionnaire, unwilling students, questionnaire of 800 students of all year were collected for analysis in the study.

The overall prevalence of substance abuse was 57.4%. The highest prevalence of substance abuse was in 2<sup>nd</sup> year (76%), followed by 3<sup>rd</sup> year (63.7%) and early part of 4<sup>th</sup> year (49.7%).

The remaining 42.6% students did not use any of the drugs (Table – 1)

Table No. 1 Year wise distribution of Drug users

Year	Substance use		Total
	Yes Number (%)	No Number (%)	
1 <sup>st</sup> Year	78(39.00)	122(61.00)	200
2 <sup>nd</sup> Year	154(76.24)	48(23.76)	202
3 <sup>rd</sup> year	132(63.77)	75(36.23)	207
4th Year	95(49.74)	96(50.26)	191
Total	459(57.38)	341(42.62)	800

Table- 2 shows that out of all drugs, tobacco was used by maximum number of students (57.4%) followed by alcohol (27.3%). Most of the students (37.0% for tobacco & 49.1% for alcohol) initiated drugs at the age of 17 – 18 years. Psychosocial stress was the main reason of substance abuse (66.0%) followed by other reasons like enjoyment (39.4%), curiosity (39.2 %%) etc. (Table-3)

Table 2  
Prevalence of different types of Substance use\* (N=800)

Drugs	Number of users	%
Tobacco	459	57.38
Alcohol	218	27.25
Cannabis	83	10.38
Cocaine	0	0.00
Amphetamine	9	1.12
Hallucinogen	3	0.38
Inhalable substance	6	0.75
Tranquilizers	8	1.00
Sedatives	30	3.75
Opium	12	1.50

\*Multiple response

Table 3  
Reasons of substance abuse (N=459)

Reasons	Number	%
Relief of Psychological Stress	303	66.01
To be sociable	92	20.04
To be accepted by others	80	17.43
Religious customs	31	6.75
Enjoyment	181	39.43
Enhancement of Sex	119	25.92
Curiosity	180	39.21

Treatment of Health Disorder	75	16.33
Relief of cold, Hunger	194	42.26

Table -4 shows that friends (42.04%) were the main source of drugs followed by causal acquisition (30.06%) and family (20.04%). Though residential status has got little relation with substance abuse but city dwellers were found to be more substance abuser than village dweller, found in this study.

Table 4  
Distribution of substance users according to source of introduction to substance use  
(N=459)

Source	Number	%
Family	92	20.04
Causal Acquisition	138	30.06
Friends	193	42.04
Drug Pushers	2	0.43
Doctor	28	6.10

## **Discussion:**

### **Prevalence of substance use:**

The present study revealed that overall prevalence of substance use was 57.4 % (table 1) and 2<sup>nd</sup> year students were reported to be used drugs maximum (76.24%) and lowest use was in 1<sup>st</sup> year (39.0%). The substance use rate reported to be quite high (63.77%) among 3<sup>rd</sup> year students also. Padhy GK, Das Sangeeta, Sohu T on the other hand reported little lower prevalence (45.987%) on their study among medical students in Bhubaneswar in 2014.<sup>9</sup> Little higher prevalence (60.0%) was reported by Quadri SS, Goel RKD, Singh Jagjeet et al in their study in 2013.<sup>10</sup>

### **Prevalence of tobacco & Alcohol:**

Tobacco was used by maximum number of students (57.4 %) followed by alcohol (27.3%) in present study. Higher abuse rate was revealed by Padhy G K, Das Sangeeta, Sahu Trilochan & Paridha S, in their study<sup>9</sup> in 2014 where Tobacco (72.84%) & alcohol (68.25%) were the mostly abused substance.

### **Prevalence of Cannabis:**

Cannabis was abused by only 10.4% of the respondents in present study. But much higher cannabis use rate (28.5%) was observed by Jagnany et al in their study<sup>2</sup>. On the other hand only

4.4% of the college students abused cannabis in Kashmir valley as found by Baba T A et al in their study<sup>3</sup>. Rai Dheeraj et al also found low cannabis use rate (6.6%) among medical students in their Study<sup>11</sup>.

**Reasons of Substance Abuse:**

Relief of psychosocial stress( 66%) was the main reason of substance abuse found in this study followed by curiosity(39.1%).Jagnany VK et al<sup>2</sup> found curiosity was the main cause (61.1%) of substance abuse among Hostel Students in their study and relieve of tension reported ( 18.9%) to be the reason of substance abuse.

**Source of Introduction to Substance:**

Present study revealed that friend was the main source of drugs (42%) they used. This finding was supported by Jagnany V K et al in their study<sup>2</sup>. They reported that friend were the commonest source of introduction to all the substances.

**Conclusion:**

As more than half of the surveyed medical students abused at least one drug, the problem of Substance abuse may be considered high and immediate intervention should be taken to check the problem for better future.

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