



ORIGINAL RESEARCH PAPER

Medicine

PREVALENCE AND TYPES OF SUBSTANCES USED AMONG COLLEGE STUDENTS IN A PROFESSIONAL INSTITUTE, INDORE.

KEY WORDS: substance, abuse, Professional colleges, alcohol, tobacco, illicit substances

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ABSTRACT

As we find ourselves in the beginning of a new millennium, we are faced with challenges to our survival as a human population. Studies done in India as well as abroad point towards an increasing trend towards the prevalence of substance abuse in college students, as well as the general population.

The Objective of the study was to determine the prevalence and types of substances used among college students.

An institution based cross sectional survey was conducted to assess the prevalence and types of substances used among the students of four Professional colleges from December 2015 to December 2016. The population targeted was all the students, provided they met the pre requisites. The tool used was a pre-designed and pre-tested semi-structured questionnaire which was self-administered by the students.

The age of the participants was from 18 to 25 yrs. A total of 864 (62.93%) males and 509(37.07%) females agreed to participate in the study. The number of students who are originally from outside Indore are larger, 719(52.37), than those from Indore (47.63%). Alcohol seems to be the most popular substance among the students with a total of 327(23.82%) students using it followed by Smokable tobacco 296 (21.56%) students, Chewable Tobacco 103(7.5%) students, and Marijuana by 91 (6.63%) students. The number of students who seem to use illicit substances such as Amphetamines, Ecstasy and Injectable drugs is higher in the Medical College as compared to the other three colleges.

This study does manage to at least highlight some of the major issues that may be present in a large educational institution, and the strength of this study is the blend of students coming from varied fields of study.

INTRODUCTION

As we find ourselves in the beginning of a new millennium, we are faced with challenges to our survival as a human population. Drug addiction, although often regarded as a personality disorder, may also be seen as a pandemic with influences from genetic, evolutionary, physiological, and environmental factors which control this behavior. Globally, the use of drugs has reached all-time high. On average, drug popularity differs from nation to nation.

Now in the 21st century it is no secret that recreational drugs have flooded the market, with the old ones getting refined and new ones appearing every day, in fact there is an influx of substances from all over the world currently into India. It is estimated that 1 in 20 adults, or 250 million people between the ages of 15 and 64 years, used at least one drug in 2014.^{2,3}

As time progresses there appears to an increasing number of people who prefer to consume licit as well as illicit substances for various purposes and the most alarming fact is that the age of the people using the substances is falling as rapidly. The major culprits for this appear to be rapidly increasing availability, the glamour of popularity and pressure from peers, to mention a few⁴

Similar such studies done in India as well as abroad point towards an increasing trend towards the prevalence of substance abuse in college students, as well as the general population.^{4,5,6,7,8,9}

OBJECTIVE

The Objective of the study was to determine the prevalence and types of substances used among college students.

RESULTS

Table 1: Age, Gender and Course wise Distribution of College Students

	Nursing			Pharmacy			Engineering			MBBS			Total		
	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T
18 Yrs	36	62	98	75	31	106	125	28	153	20	18	38	256	139	395
19 Yrs	43	53	96	43	5	48	85	19	104	25	18	43	196	95	291

20 Yrs	52	54	106	46	26	72	46	8	54	23	22	45	167	110	277
21 Yrs	28	30	58	39	14	53	38	3	41	15	50	65	120	97	217
22 Yrs	5	8	13	16	0	16	14	2	16	25	24	49	60	34	94
23 Yrs	2	1	3	7	0	7	2	0	2	24	26	50	35	27	62
24 Yrs	1	0	1	0	0	0	0	0	0	14	3	17	15	3	18
25 Yrs	3	3	6	0	0	0	0	0	0	12	1	13	15	4	19
Total	170	211	381	226	76	302	310	60	370	158	162	320	864	509	1373

Table 2 Age wise distribution According to the Place of Residence

	Indore			Outside Indore			Total		
	M	F	T	M	F	T	M	F	T
18 Yrs	124	80	204	132	59	191	256	139	395
19 Yrs	82	40	122	114	55	169	196	95	291
20 Yrs	84	62	146	83	48	131	167	110	277
21 Yrs	54	40	94	66	57	123	120	97	217
22 Yrs	28	11	39	32	23	55	60	34	94
23 Yrs	18	11	29	17	16	33	35	27	62
24 Yrs	9	0	9	6	3	9	15	3	18

25 Yrs	8	3	11	7	1	8	15	4	19
Total	407	247	654	457	262	719	864	509	1373

Table 2 shows the distribution of students according to the place of permanent residence of their families in comparison to their age wise distribution. The number of students who are originally from outside Indore are larger, 719(52.37%), than those from Indore (47.63%). The percentage of girls who are originally from Indore is higher than the percentage of girls who are from outside Indore, when compared to males, i.e. 37.77% (247) and 36.44% respectively. In accordance with the earlier tables the maximum number of students are from the 18 to 21 yrs. age group, the largest numbers being in the 18 yrs. category i.e. 204(14.86) from Indore and 191(13.91%) from outside Indore.

Table 3: Types of Substances used in Four Colleges

	Nursing			Pharmacy			Engineering			MBBS			Total		
	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T
Alcohol	66	22	88	57	14	71	60	9	69	59	40	99	242	85	327
Tobacco(Smoke)	71	27	98	57	9	66	46	6	52	49	31	80	223	73	296
Tobacco(Chew)	31	5	36	23	3	26	14	1	15	16	10	26	84	19	103
Marijuana	17	4	21	12	0	12	17	4	21	23	14	37	69	22	91
DOD ***	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Amphetamines	4	3	7	3	1	4	5	2	7	9	11	20	21	17	38
Ecstasy	3	0	3	3	0	3	6	4	10	8	9	17	20	13	33
Injectable Drugs	14	5	19	3	0	3	3	0	3	4	0	4	24	5	29
Others	1	0	1	0	0	0	0	0	0	1	1	2	2	1	3
None	76	173	249	147	56	203	241	50	291	91	119	210	555	398	953

*** This is a zero value because all participants who said yes to DOD (Dummy Drug) were automatically excluded from the study.

Table 3 show the substances that are used in all the four colleges. As depicted Alcohol seems to be the most popular substance among the students with a total of 327(23.82%) students using it followed by Smokable tobacco 296 (21.56%) students, Chewable Tobacco 103(7.5%) students, and Marijuana by 91 (6.63%) students. This pattern is altered in the Nursing college in that a higher number of students prefer Smokable Tobacco i.e. 98(7.1%) students over Alcohol i.e. 88(6.41%) students. The pattern is also altered in the engineering and medical colleges where third most popular substance appears to be Marijuana which is preferred over Chewable Tobacco. The number of students who seem to use illicit substances such as Amphetamines, Ecstasy and Injectable drugs is higher in the Medical College as compared to the other three colleges. A total of 953(69.41%) students claim to not use substances which means 420(30.59%) students in total use at least one substance out of 1373 students.

DISCUSSION

Substance use appears to be a problem of gigantic proportions across current world. There exist variations across the world, in fact there are different patterns and prevalence of substance use among college students across cities within the same country as well. The current study clearly showed a prevalence of 30.59 % and this was very much directly comparable to the study conducted by Taufel Baba et al in North India(Kashmir Valley) where the Prevalence of substance abuse was found to be 31.3%.² A much higher prevalence 58.7% and 57.4 % of ever having used substances was found by R. Juyal et al in the college students of Dehradun District⁴ and by S. Gupta et al in the college students of North India.⁵ Male Under graduate medical students of Kanpur showed a prevalence of 40% of substance abuse in a study conducted by S. Nigam et al¹⁰ which was comparable to the current study i.e.42.40% in male medical students.In a study conducted in Kolkata the comparison of tobacco usage among Medical and Non-Medical students showed a Prevalence of 18.3 % among Medical students and 43.3% among Non-Medical students, however in the present study the usage of tobacco in medical students is higher i.e. 25.31% and significantly lower in non-

medical students i.e. 20.99%.¹³ A Bhubaneswar study conducted by G. Padhy et al. in three medical colleges have shown the prevalence of substance abuse to be 45.87% among all students and 74.03% in males, when compared to the current study this percentage was lower in both total students (30.59%) and among male students(35.76%).¹⁴ Jambaiah et al have shown that the prevalence of tobacco consumption among first year medical students is 24%, however this percentage is extremely low in the current study i.e. 7.5% of first year medical students consume tobacco products,¹⁵ this could be due to the fact that chewable tobacco has been banned in Madhya Pradesh since 2012.¹⁶ A.Arora et al conducted a study in Meerut among medical students which has shown a lower prevalence of substance use as compared to the current study i.e. 20.43%, however the gender distribution of substance abuse was comparable to the current study i.e. more in males(30%) than females(11.6%).¹⁷

However this pattern was altered in the studies by:

- Taufel Baba et al whereby the most common substance used was tobacco (22.5%) followed by solvents (10.0%) and alcohol(6.2%) was third in number.²
- H. Goswami, where alcohol was the most commonly used substance (49%), but second most commonly used substance was Heroin(22%).¹⁸
- A. Nadeem et al have shown that although the commonest substance used all over India was alcohol(60-98%), the second most common substance was Cannabis(4-20%).¹⁹
- G Padhy et al have shown that the commonest substance abused in medical colleges is Cigarettes(72%) followed by alcohol(68%), gutka (24%), and drugs (23%)¹⁴
- Gabreslassie et al have shown that the among Ethiopian University students the most commonly used substance was Alcohol (34.5%), Khat(28.7%), and Cigarette smoking (9.3%).²⁰
- A. Odijie has stated that alcohol is the most used substance in Africa, however it is closely followed by use of hypno-sedatives and other prescription drugs (e.g. ephedrine). Use of volatile substances is also recent and predominant in males in Africa.²¹

- g. Among Sao Paulo students, as per Stempluk et al the drugs most often used are Tobacco (53.98%), alcohol (49.24%), and marijuana (40.03%). Drugs most often experimented with before entering college were marijuana (83.78%), inhalants (43.66%), hallucinogens (18.29%), and cocaine (14.07%)²²

CONCLUSION

Early stages of adulthood are an extremely important phase in the life of a person. Substance use tends not only to disrupt the health of the individuals involved but it also has a long lasting and possibly devastating impact on the relationships of the people involved including friends, family members, spouses and children, not to mention directly or indirectly affecting the ability of a productive asset of society from performing his everyday role. This study does manage to at least highlight some of the major issues that may be present in a large educational institution, and the strength of this study is the blend of students coming from varied fields of study. This study manages to highlight certain facts that the prevalence of substance abuse, though lower than some studies is still very high, with almost 1/3 of the student populations using some kind of substance and that substance use is more predominant in males as compared to females.

Recommendations

In spite of constantly reassuring the students that they would not be held accountable for what they have written, there always seemed to be a certain amount of visible apprehension on the part of the students therefore, for the students who can be identified to be substance users, a more comprehensive study involving them should be performed with the possible addition of a counselling session by a trained counsellor, and encouraging the families to take part in the session. Similar such studies should be conducted in other institutions so as to obtain a better picture.

Limitations

The students were from the same parent institute and campus, hence the sample may not be representative of the student population of Indore, or Madhya Pradesh.

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