



# Socio-Demographic Characteristics of Substance Abusers Among Intercollege Students in a District of Uttarakhand

Ruchi Juyal, Rahul Bansal, Surekha Kishore, K.S. Negi

## Abstract

Substance abuse by children and adolescents is a major health problem. The use of illicit substances frequently starts among school children during adolescence. Concern with the use of harmful habit forming substances in students appears to be a very natural reaction; as they constitute a vital part of the society. Their age and often sudden wide exposure to new environments may render them extremely vulnerable for substance abuse. To find out the association of socio-demographic factors with substance abuse among intercollege students, a Cross-sectional study was conducted among intercollege students of district Dehradun. Multistage random sampling was used for the selection of two intercolleges (one rural and one urban). Overall 1094 students from 9th to 12th classes were included in the study. Statistical analysis was done by entering the data in SPSS software. The prevalence of substance abuse was found to be maximum in the students belonging to the middle slab of income group (socio-economic classes II, III and IV). Non-vegetarian dietary habits, Hindu religion and fathers in professional jobs were also found to be major risk factors for substance abuse behaviour among students.

## Key Words

Substance abuse, students, rural-urban

## Introduction

The problem of substance abuse has become a global public health concern and is fast assuming alarming proportions not only in developed countries but also in developing countries. It has received greater attention in recent times, not much due to the novelty or magnitude of the problem itself, but more due to the changing trends in the usage (1). Substance abuse remains critical problems in most countries and is associated with several social and economic consequences. This assumes greater relevance in developing countries like ours, already burdened with inadequate health-care facilities consequent to overpopulation, unregulated fertility, poverty and illiteracy (2).

Initiating illicit substance use and its continuation appears to be significantly influenced by societal norms

and peer pressure. Social environment plays a vital role on the acceptance of substances/ drugs among the adolescents. The present study highlights the effects of sociodemographic variables on the problem of substance abuse among intercollege students of a district of Uttarakhand.

## Material and Methods

This study was carried out in two intercolleges of district Dehradun of Uttarakhand. These intercolleges were selected by multistage random sampling. A sample size of 816 was worked out for the survey. The data was obtained by using a self-administered questionnaire, which was a modified Hindi version of WHO questionnaire (3) for drug use survey. All students studying in 9<sup>th</sup> to 12<sup>th</sup> classes of the selected intercolleges were eligible for the survey, so as to get the desired sample size.

From the Department of Community Medicine, HIMS, Swami Rama Nagar, Doiwala, Dehradun.

Correspondence to : Dr. Ruchi Juyal, Assistant Professor, Deptt. of Community Medicine, HIMS, Swami Rama Nagar, Doiwala, Dehradun.



A total of 1123 students were given questionnaires during the visits, after explaining them the anonymous nature of the data collection. Overall 1094 students (532-rural and 562-urban) returned fully filled questionnaires and were included in the study.

Analysis was done by entering the data in SPSS software. Chi-square test and percentages were used as per requirement.

**Definitions:** For the purpose of the study, following definitions were taken into account:

**Ever User:** the respondent, who accepts having taken a mentioned substance ever in life.

**Regular User:** the respondent, who accepts having used a mentioned substance in the past month, and also mentions the frequency of use.

For relating substance abuse with father's occupation, three categories were made - first comprising of professional jobs, business and service, the second one of agricultural and labour occupation and the third of other jobs and non-respondents.

## Results

A total of 1094 students studying in classes 9th to 12th participated in this study, out of which 684 were males and 410 were females. A total of 58.7% students were found to be ever users while 31.3% agreed upon being a regular user for any of the mentioned substances in the questionnaire. The prevalence of regular use of mentioned substances was significantly higher among urban students as compared to rural students (urban - 37.9%, rural - 24.4%) [ $p < 0.001$ ]. Substance abuse was quite high in all age groups (13-18 yrs) and the difference was not found to be statistically significant. The abuse of mentioned substances was significantly more in male students as compared to female students (45.8% & 7.3% respectively). It can be seen from table-I that the prevalence of substance abuse among various socioeconomic classes was found to be maximum in the middle slab i.e. social classes II, III and IV. The overall difference in the prevalence rate of substance abuse among various socioeconomic classes was found to be statistically significant ( $p < 0.01$ ) (Table-1).

Table- 2 shows that the prevalence of substance abuse was much higher (38.8%) in non-vegetarian students as compared to vegetarians students (24.1%). This

difference was found to be highly significant ( $p < 0.0001$ ). The trend was similar for rural and urban students.

The present study revealed that the occupation of father and prevalence of substance use were related to each other. The prevalence of substance abuse was much more (36.4%) among students whose fathers were in professional occupation (doctors, engineers, C.A. etc)/ business or in service as compared to the other two categories (Table-3). This difference was found to be highly significant ( $p < 0.001$ ). This trend was similar for rural and urban students.

No relation between substance abuse and type of family was observed in this study. The prevalence of substance abuse was almost equal among the substance abusers belonging to joint and nuclear families ( $p > 0.05$ ). (Table-4)

Table-5 reveals that the substance use was maximum among Hindus (32.0%), followed by Muslims (25.0%) and Sikhs (21.0%). This difference was found to be statistically significant ( $p < 0.05$ )

**Table-1: Substance Use by Socio-Economic Status**

Socio economic status	Rural		Urban		Total	
	No. of students	No. of Reg.* users	No. of students	No. of Reg.* users	No. of students	No. of Reg.* users
I	22	5 (37.1)	52	15 (28.8)	74	20 (27.0)
II	70	26 (37.1)	151	51 (33.8)	221	77 (34.8)
III	141	36 (25.5)	184	79 (42.9)	325	115 (35.4)
IV	157	37 (23.6)	128	55 (42.9)	285	92 (32.3)
V	139	25 (20.0)	47	13 (27.6)	186	38 (20.4)
NR	3	1 (33.3)	-	-	3	1 (33.3)
<b>Total</b>	<b>532</b>	<b>130 (24.4)</b>	<b>562</b>	<b>213 (37.9)</b>	<b>1094</b>	<b>343 (31.3)</b>

Figures in Parentheses denote the percentages ( $\chi^2 = 14.43$ ,  $df=4$ ,  $p < 0.01$ )

-Reg. user (abbreviation) denotes Regular user.

-NR (abbreviation) denotes those students who have not responded to the question



Table-2: Substance Use by Dietary Habits

Dietary Habits	Rural		Urban		Total	
	No. of Students	No. of Reg. users	No. of students	No. of Reg. users	No. of students	No. of Reg. users
Vegetarian	279	53 (19.0)	274	80 (29.2)	553	133 (24.1)
Non vegetarian	253	77 (30.4)	288	133 (46.2)	541	210 (38.8)
<b>Total</b>	<b>532</b>	<b>130</b> (24.4)	<b>562</b>	<b>213</b> (37.9)	<b>1094</b>	<b>343</b> (31.3)

Figures in Parentheses denote the percentages  
( $\chi^2 = 27.1, df=1, p<0.001$ )

Table-3: Substance Use by Father's Occupation

Father's occupation	Rural		Urban		Total	
	No. of students	No. of Reg. users	No. of students	No. of Reg. users	No. of students	No. of Reg. users
Labour + agriculture	249	48 (19.3)	52	16 (30.8)	301	64 (21.3)
Business+ Service + Professional	249	76 (30.5)	466	184 (39.5)	715	260 (36.4)
Other + NR	34	6 (17.6)	44	13 (29.5)	78	19 (24.4)
<b>Total</b>	<b>532</b>	<b>130</b> (24.4)	<b>562</b>	<b>213</b> (37.9)	<b>1094</b>	<b>343</b> (31.3)

Figures in Parentheses denote the percentages  
( $\chi^2 = 23.8, df=2, p<0.001$ )

Table-4: Substance Use by Type of Family

Family type	Rural		Urban		Total	
	No. of students	No. of Reg. users	No. of students	No. of Reg. users	No. of students	No. of Reg. users
Joint	166	46 (27.7)	124	47 (37.9)	290	93 (32.1)
Nuclear	366	84 (22.9)	438	166 (37.9)	804	250 (31.1)
<b>Total</b>	<b>532</b>	<b>130</b> (24.4)	<b>562</b>	<b>213</b> (37.9)	<b>1094</b>	<b>343</b> (31.3)

Figures in Parentheses denote the percentages  
( $\chi^2 = 2.86, df=1, p>0.05$ )

Table-5: Substance Use by Religion

Religion	Rural		Urban		Total	
	No. of students	No. of Reg. users	No. of students	No. of Reg. users	No. of students	No. of Reg. users
Hindu	451	113 (25.1)	543	205 (37.7)	994	318 (32.0)
Muslim	7	2 (28.6)	5	1 (20.0)	12	3 (25.0)
Sikh	65	11 (16.9)	11	5 (45.4)	76	16 (21.0)
NR	9	4 (44.4)	3	2 (66.7)	12	6 (50.0)
<b>Total</b>	<b>532</b>	<b>130</b> (24.4)	<b>562</b>	<b>213</b> (37.9)	<b>1094</b>	<b>343</b> (31.3)

(Figures in Parentheses denote the percentages)  
( $\chi^2 = 4.52, df=1, p<0.05$ )

## Discussion

In the present study, The abuse of mentioned substances was significantly more in male students as compared to female students (45.8% & 7.3% respectively) as seen in previous study (4). Substance abuse was found to be maximum in socio-economic classes II, III and IV with least among socio-economic class V. This is in contrast to the findings observed by Kushwaha *et al* (5), who found a higher prevalence of drug abuse among those belonging to lower income groups. This could be due to changing societal structure and norms and also due to the regional differences.

Non-vegetarian students were abusing mentioned substances much more as compared to the vegetarians (38.8% and 24.9% respectively) and this difference was highly significant ( $p<0.001$ ).

It was revealed from this study, that the substance abuse was significantly associated with father's occupation ( $p<0.001$ ). The prevalence of substance abuse was maximum among students with fathers in professional occupations, business or in service. This finding was in accordance with Soyibo *et al* (6), who reported that the drug use was significantly more in children of professionals in Jamaica; while Khan and Unnitham (7) did not find any association between father's occupation and drug abuse.

This finding in the present study can be explained by the fact that majority of the substances including arecanut



and panmasala were obtained from shops, and children of professionals/businessmen/servicemen perhaps have more freedom as well as money to buy these things. This may be due to the fact that these persons usually do not spend enough time with their children and tend to make up for this by providing them pocket money. But the child who does not know how to spend this money may go astray under the influence of peer group and may indulge in substance/drug use behaviour.

No difference was found in the prevalence of substance abuse between the students coming from nuclear and joint families, similar to the findings of Mohan *et al* (8) at Delhi. In contrast, Sundaram *et al* (9) reported high alcohol use in males belonging to nuclear families.

Substance abuse was found to be more among Hindu students as compared to other religions and the difference was found to be statistically significant ( $p < 0.05$ ). Similar findings were also reported by Dube *et al* (10) at Agra and Sethi and Manchanda (11) at Lucknow. Kushwaha *et al* (5) also found the higher prevalence of drug abuse among Hindu students (28.7%) as compared to Muslim students (21.2%) at Gorakhpur. It may be because of the fact that in Hindu religion there is no strict prohibition on the use of traditional drugs like tobacco or alcohol as exists in other major religions. In fact, during some Hindu festivals, cannabis and alcohol are taken by a large number of people as a ritual within the family. On the other hand, Verma *et al* (12) at Chandigarh could not find any significant difference in drug abuse among students according to religion. Similar trends have been recorded recently in a multicentric study published from Jammu region which showed high prevalence of tobacco use in school going children (13). Even the use of substance in form of tobacco in youth outside India has been shown to be high constantly (14). Thus, prevention programmes are imposed early in the elementary schools with cessation policies to target all the school children (15).

### Conclusion

Based on the findings, it can be concluded that male students belonging to urban areas, non-vegetarian by diet and Hindu by religion were found to be at an increased risk of developing substance-abuse behaviour. So school authorities should pay special attention to the students belonging to such high-risk categories. An "at risk" approach aiming at primordial prevention can be initiated at the time of admission to a secondary school. Students belonging to high-risk categories can be identified at the

time of admission and closely watched for any signs of development of substance abuse. As it was found that the children whose fathers were in the first category (i.e. professional jobs, business and service), were indulging more in substance abuse; so parents (particularly professionals) should be counseled to spend more quality time with their children and to inconspicuously keep a check on their spending habits. These findings can be taken into consideration while formulating policies for drug/substance abuse prevention and control programme.

### References

1. United Nations Office on Drugs and Crime. Project title: National Survey on extent, patterns and trends of drug abuse in India; 2003- A Report.
2. Tripathi B M, Lal R. Substance abuse in Children and Adolescents. *Ind J Paed* 1999; 66:569-75.
3. Smart RG, Hughes Johnston LD. A methodology for student drug-use surveys. Geneva, World Health Organization; 1980. pp.5-55 (WHO offset Publication, No.50)
4. Juyal R, Bansal R, Kishore S, Negi K S, Chandra R, Semwal J. Substance use among Intercollege Students in District Dehradun. *Ind J Community Med* 2006;31:252-54.
5. Kushwaha KP, Singh YD, Rathi AK, Singh KP, Rastogi CK. Prevalence and Abuse of Psychoactive Substances in Children and Adolescents. *Ind J Paed* 1992; 59:261-68.
6. Soyibo K, Lee MG. Use of Illicit Drugs among High School Students in Jamaica. *Bulletin WHO* 1999; 77:258-62.
7. Khan MZ, Unnitham NP. Association of Social Economy Factors with Drug Use among College Students in an Indian Town. *Bull Narc* 1979; 31:61-69.
8. Mohan D, Chopra A, Sethi H. Incidence Estimates of Substance Use Disorders in a Cohort from Delhi, India. *Ind J Med Res* 2002; 115:128-135.
9. Sundaram KR, Mohan D, Advani GB, Sharma HK, Bajaj JS. Alcohol Abuse in a Rural Community in India. Part -I: Epidemiological Study. *Drug Alcohol Depend* 1984; 14:27-36.
10. Dube KC, Kumar A, Kumar N, Gupta SP. Drug Use among the College Students: An interim report. *Bull Narc* 1977; 29:47-62.
11. Sethi BB, Manchanda R. Pattern of Drug Abuse among Male Medical Students. *Indian J Psychiatr* 1978; 20:166-73.
12. Verma VK, Dang R. Non Medical Use of Drugs amongst School and College Students. *Ind J Psychiatry* 1979; 22:228-34.
13. Singh R, Kour H, Jindal SK *et al*. Global youth tobacco survey: A report from Jammu & Kashmir. *JK Science* 2008;10(2):65-69.
14. Paul SL, Blizzard L, Patton GC, *et al*. Parental smoking and smoking experimentation in childhood increases the risk of being a smoker 20 years later: The Childhood Determinants of Adult Health Study. *Addiction* 2008; 103:846-53.
15. Damianaki A, Kaklamani S, tsirakis S, Clarke R, Tzanakis N, Markis D. risk factors for smoking among school and adolescents in Greece. *Child Care Health Dev* 2008; 34: 310-15