

## EPIDEMIOLOGICAL ANALYSIS OF SUBSTANCE ABUSE AMONG COLLEGE STUDENTS IN THE KASHMIR VALLEY, NORTH INDIA

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### ABSTRACT

This paper reports an epidemiological study on substance use among college students in North India, specifically in the Kashmir Valley. A cross-sectional study used a multi-stage sampling strategy in five districts randomly selected for sample collection from 200 college students. It is a pretested, self-administered questionnaire that was derived from the World Health Organization framework for data collection, thereby going into fine details about sociodemographic profiles, drug use patterns, and opinion regarding the health hazards associated with substance use. Results in drug use analysis indicated that 31.5% claimed to have at some point used drugs, though tobacco was the most prominent at 33%, alcohol ranked second at 19%, and inhalants were at 15%. In their identification of lung cancer as the primary health issue related to substance abuse, the respondents displayed high awareness of the risks involved. These findings demand an intervention strategy that is targeted against the scourge of drug addiction among the college-going youth of the region.

**Keywords:** Epidemiological Analysis, Substance Abuse, College Students, Kashmir Valley, North India,

### I. INTRODUCTION

Addiction to substances is a major problem in world public health. Predictions for 2024 indicate that illegal substance use occurred among 167–315 million adults, or 3.6%–6.9% of the adult population aged 15–64. Tobacco use accounts for 3.7% of all disease burdens, while alcohol and illicit substance use account for 5.4%. The most popular illicit drug in Asia is opium, in South America it is cocaine, and in Africa it is cannabis. Substance abuse among adolescents is a major public health concern. A person's health, family, community, profession, and educational possibilities can all take a hit when they abuse substances, which is a worldwide epidemic among young people.

University students have a lot of freedom, including the ability to make their own decisions, not be micromanaged by adults, and to deal with heavy academic demands. In addition, they get the opportunity to live with people they don't know, form new friendships, figure out how to juggle social commitments with schoolwork and other duties, and, in some cases, encounter normative views that differ from their parents'. Substance abuse, excessive drinking, and smoking are encouraged by these societal standards among the youth. Transitioning from a regulated, supervised life to an increasingly autonomous one, college students are molded by their academic milieu. Substance addiction is thus more likely to occur at educational institutions.

New data shows that substance abuse and use have been on the rise globally, particularly in developing countries. Several studies have shown that drug misuse is on the rise among South Asian nations' student populations. Studies in northern India have shown that narcotics like heroin, cocaine, inhalants, cannabis, alcohol, and weed are commonplace in secondary and even some tertiary educational institutions. Many people view alcohol and tobacco as "gateway drugs" that lead to the use of other drugs. Substance abuse contributes to the alarming increase in adolescent mental health problems. People who struggle with substance use problems are more likely to experience premature death and mental disease compared to the general population. Although data on the prevalence of drug use among college students is lacking, it is believed that substance abuse is on the rise in Kashmir Valley. This study aims to assess the prevalence of substance use among college students and the factors that contribute to it.

### II. LITERATURE REVIEW

Goyal, A. K. et. al. (2022) studied substance use disorder patients at Northern Kashmir's de-addiction center from August 2017 to July 2018. All de-addiction center patients were studied. Inclusion criteria: The study

included substance users at the de-addiction center. Refusing to participate, substance-using individuals at the de-addiction facility were excluded. A pretested questionnaire that was semi-structured was one of the study tools. The data was analyzed using SPSS 23 and Excel. The ethics panel at the university gave its stamp of approval. The patients' ages ranged from 10 to 62, with a mean of 29.58 years (8.8) and a standard deviation of 10. The majority of substance use (56% of cases) began between the ages of 11 and 20. Nicotine usage was the most prevalent in our research. Peer pressure was the leading source of drug dependence (52.8%), with abstinence-promoting factors coming in second (29.6%). The onset of substance use disorders at a young age is worrisome. More youth are using drugs, so preventive, curative, and rehabilitative techniques must be developed.

**Zarin, L. et. al. (2019)** showed 43.0% student substance abuse. Children and adolescents should be targeted for prevention because most students started abusing drugs early. Substance addiction disorders produce high morbidity, mortality, and economic loss, making them a major public health issue. Due to scholastic pressure, social group influence, and greater substance availability, youth are more susceptible to substance usage. The following study examined Meerut degree college students' substance abuse prevalence and socio-demographic variables. Consider 30% substance abuse prevalence, calculate 900 sample size. 300 students from each college were randomly selected. Statistics were applied to pre-designed questionnaire data.

**Dar, A. A. et. al. (2022)** assessed the prevalence of adverse childhood experiences in all ten districts of the Kashmir Valley. The prevalence of adverse childhood experiences (ACEs) was determined in a cross-sectional study using multi-stage sampling. Research was conducted with 800 college and university students from Kashmir using the "Adverse Childhood Experiences" (ACEs) assessment. According to the results, 15.4% of respondents indicated high levels of adverse childhood experiences (ACEs), 13.4% reported extremely high levels, 26.3% reported moderate levels, 34.0% of kids reported low levels, and 11.8% reported no exposure at all. Adults in Kashmir were more likely to have experienced adverse childhood events (ACEs) than women (82.7%) and men (90.8%). The following were the most common adverse childhood experiences: being "often or very often sworn at, insulted, or put down" (49.8%), being "often or very often acted in a way that made them afraid that they would be physically hurt" (47.6%), being "pushed, grabbed, shoved, or slapped" (41.6%), being "hit so hard that they had marks or were injured" (28.3%), and being "touched or sexually fondled" (25.3%). On 13 out of 21 poor outcomes in childhood, there was a strong correlation between gender.

**Bhagat, S. (2021)** looked analyzed the demographics and methods of suicide attempters who presented to emergency rooms. Participants in this 1.5-year cross-sectional observational study who met inclusion and exclusion criteria were patients undergoing outpatient or inpatient services at the Institute of Mental Health and Neurosciences-Kashmir, which is affiliated with Government Medical College Srinagar. Each patient was informed of the purpose of the interview and their consent was obtained in a straightforward manner. Following unsuccessful suicide attempts, 221 patients were admitted to emergency and psychiatry departments for further evaluation. The average age of the participants in the study was  $24.61 \pm 8.9$  years, and there were 161 females (72.9%) and 60 males (27.1%). Suicide attempters were 34.4% lower middle class, 24% upper middle class, and 5.9% lower class. The upper grades had the fewest cases (1.4%). The most common method was poisoning, whereas self-immolation was rare. Poisoning and self-mutilation were higher in women than men ( $p < 0.05$ ). There should be a strong structure to handle and follow up this people.

### III. RESEARCH METHODOLOGY

The study aims to carry out an epidemiological analysis of substance misuse among students at colleges in the Indian state of Kashmir. This research approach is so designed to ensure that there will be adequate assessment of the views and trends of use of drugs by students. The following steps are part of methodology:

#### Study Design

A cross-sectional survey approach was used to gather data from degree college students in five randomly selected districts of the Kashmir Valley.

#### Sampling Procedure

To ensure that the sample drawn for the study from the Kashmir Valley represented the population of interest, a multi-stage sampling technique was adopted. In the first stage, five districts out of 10 were chosen at random. The next step was to list and stratify 50% of the degree awarding colleges in these counties, with the proviso

that no county containing only one male, female, or co-educational college was excluded. The following are inclusion percentages of male and female students from each college based on enrollment. Finally, a total sample size of 200 was achieved by the use of systematic random sampling for a sub sample of the students as represented by the formula  $n = Z^2 \cdot P(1-P) / d^2$ . This ensured that the college students' population was covered.

**Data Collection**

During two one-week visits in each sampled college, the researcher administered pretested self-administered questionnaires on the data collection process. Copies of the questionnaire were then issued to all the selected pupils. This questionnaire was originally designed by the World Health Organization (WHO) and was later adapted for use in the region. Respondents were assured of anonymity before questionnaires were issued, and the purpose of the study was explained. All respondents gave their verbal and written informed consent. The questionnaire covers a wide area, from the sociodemographic profile of respondents, which includes age, gender, marital status, income, family type, and educational level, as well as specifics about substance misuse in terms of forms and prevalence of use. It further collected opinions regarding illnesses associated with drug misuse, providing enlightenment on the backgrounds and health-related practices among the respondents.

**Analysis via Statistics**

Students whose questionnaires did not have full-form details or whose consent to enroll was withheld were excluded from the study. Data collected were summed up using percentages and mean ± standard deviation (SD) in a process intended for statistical analysis. Intergroup comparison was done at a 95% confidence range using Chi-square analysis to enable an assessment on variable relationship. This served as a fundamental step towards unearthing the best predictors of substance addiction through logistic regression analysis among the participants. Various statistical programs have been used for the analyses with MS Excel, Minitab, Java Stat, and SPSS, ensuring that the computations would indeed be exhaustive as well as accurate.

**IV. DATA ANALYSIS**

Table 1 showed the age distribution of 200 subjects in the study to be balanced because, though 50.5% were adolescents, 49.5% were adults. The sample was largely rural, at 68.0%, and male, at 65.5%. A majority of them, at 96.6%, was single, implying a younger population. In terms of literacy rates, 30.9% of the people had high school completion while, conversely, 30.9% had attended college. There is also income variation: 41.9 percent earn more than ₹10,000, whereas 27.7 percent earn less than ₹5,000. Nuclear families are the most dominant type of family organization in India, representing 52.4 percent, followed by joint families at 44.1 percent and extended families at 3.6 percent. These characteristics shed light on the respondents' backgrounds and the potential consequences for their attitudes and behaviors toward health.

**Table 1:** The sociodemographic attributes of the research participants

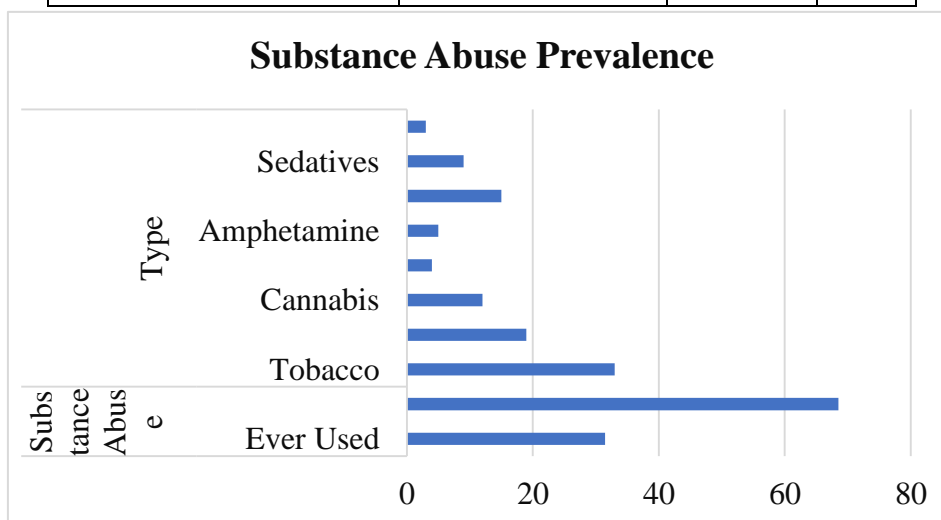
Characteristics	Sub-categories	N	%
Age (yrs)	Adolescent	101	50.5
	Adult	99	49.5
Gender	Male	131	65.5
	Female	69	34.5
Dwelling	Rural	136	68.0
	Urban	64	32.0
Marital Status	Married	5	2.4
	Unmarried	195	97.6
Level of Literacy	Primary level	2	1.5
	Middle school	16	11.6
	High school	42	30.9
	College	42	30.9
	Postgraduate	18	13.2
	Professional	16	11.9

Income	≤ 5000	55	27.7
	5000 to 10000	61	30.4
	> 10000	84	41.9
Family Type	Nuclear	104	52.4
	Joint	88	44.1
	Extended	7	3.6

From table 2, the proportion of substance abuse as reported by the participants, 31.5% have at some point in their lifetime used drugs, while a substantial majority, 68.5%, have never used drugs. It is also indicated by the type of substance used that the most often misused substance was tobacco accounting for 33% of the participants, alcohol (19%), and inhalants (15%). Twelve percent of the respondents admitted to using cannabis. Lower percentages for cocaine (4%), amphetamines (5%), sedatives (9%), and hallucinogens (3%) also appeared, perhaps indicating what is accessible and according to social standards but also at a level that indicates problematic substance usage-there are also high levels of alcohol and tobacco usage. Therefore, the data demands pointedly targeted interventions and campaigns against substance abuse. Now even more so given that besides alcohol and tobacco consumption patterns, public health concerns associated with their use raise serious questions in themselves.

**Table 2:** Substance Abuse Prevalence

Characteristics	Sub-characteristics	N	%
<b>Substance Abuse</b>	Ever Used	63	31.5
	Never Used	137	68.5
<b>Type</b>	Tobacco	66	33
	Alcohol	38	19
	Cannabis	24	12
	Cocaine	8	4
	Amphetamine	10	5
	Inhalants	30	15
	Sedatives	18	9
	Hallucinogens	6	3



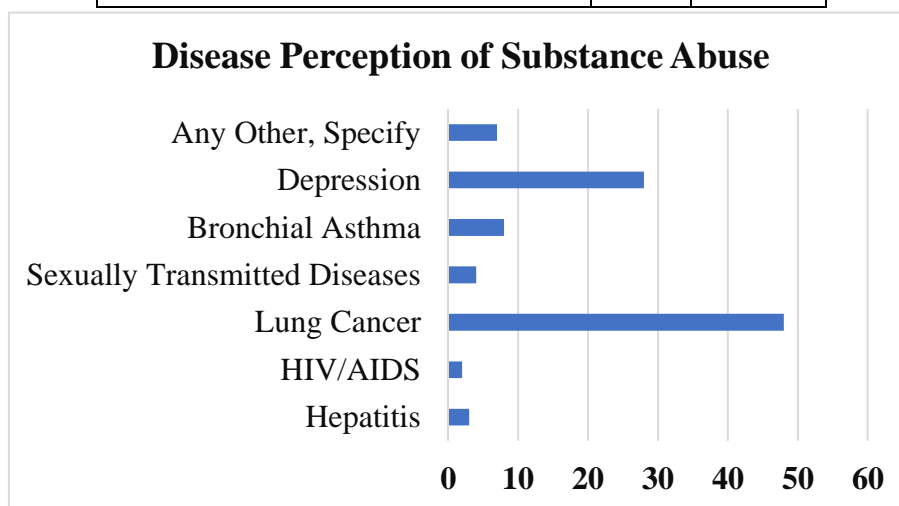
**Figure 1:** Substance Abuse Prevalence

As seen in Table 3, 200 people's perceptions of substance use disease, the largest health problem is lung cancer, which 48% of respondents say substance use is responsible for. Following this comes depression among 28%

of participants, that indicated mental health problems brought by substance use. Other illnesses include HIV/AIDS 2%, hepatitis 3%, bronchial asthma 8%, and STDs 4%, with a soberer appraisal of drug health problems. Another sign that health risks from substance use varied was that 7% of the respondents reported additional conditions. Health risks associated with substance use, particularly depression and lung cancer, have some fatal effects, which are known. This information can be applied to public health and education activities to reduce health risks from substance use.

**Table 3:** Disease Perception of Substance Abuse

Diseases	N	%
Hepatitis	6	3
HIV/AIDS	4	2
Lung Cancer	96	48
Sexually Transmitted Diseases	8	4
Bronchial Asthma	16	8
Depression	56	28
Any Other, Specify	14	7
<b>Total</b>	<b>200</b>	<b>100%</b>



**Figure 2:** Disease Perception of Substance Abuse

## V. CONCLUSION

It implies that the college students of the Kashmir Valley have really alarming rates of abusing substances, majorly alcohol and tobacco. All sections of the demographic profile, patterns of substance use habits, and perceptions about the resultant health risks signal a pressing need for concentrated public health efforts and education initiatives. The general goal for programs under education should be the provision of students with information about the negative effects on their health due to substance use, which include the hazards of lung cancer and mental disorder cases such as depression. Issues on the impacts created a challenge in order to enable people to conceptualize ideas that will be adequate in combating substance misuse and improving health practices among the youth in this region.

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