

A Study on Substance Use among School Adolescents in Jharkhand

General comments;

- The manuscript needs major revision, it cannot be published in its current form.
- The formatting style of an article has not been respected.
- Tables are not clear and statistical analyses are not well presented.
- References do not appear in the text.
- Many basic scientific guidelines for writing manuscripts have not been followed.
- I think the author should download a journal guideline and follow all the recommendations.
- I will be happy to review this paper once all the issues have been addressed. Because the topic is important and of worldwide interest in global health.
- So that I can provide further comments and appreciate the follow-up of the reviewer's comments.

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Abstract

Substance use among school adolescents in Jharkhand is a growing public health concern with significant implications for the well-being and future of the state's youth. This study explores the prevalence, causes, and consequences of drug use among adolescents in Jharkhand's educational institutions. Factors such as socio-economic stress, family dynamics, peer pressure, and the accessibility of substances are identified as primary contributors to this trend. The impact of substance use is multifaceted, affecting students' academic performance, mental health, and social development. Addressing this issue requires a comprehensive approach, including educational initiatives, community involvement, and policy interventions. There is an urgent need for coordinated efforts to prevent and mitigate substance use among school-going children in Jharkhand, ensuring a healthier and more promising future.

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Introduction

Substance use among school-going adolescents in Jharkhand has emerged as a significant public health concern. In this Indian state, marked by both urban and rural settings, the prevalence of substance use among young individuals is rising. The proportion of women aged 15 years and above consuming any kind of tobacco has increased from 5.8 per cent to 8.4 per cent during NFHS-4 (2015-16) to NFHS-5 (2019-21) whereas alcohol consumption among women has increased from 4.1 per cent to 6.1 per cent during the period mentioned above. Although, the proportion of alcohol consumption and tobacco use among men have slightly decreased during the same period. Various factors such as socio-economic challenges, peer pressure, lack of awareness and easy availability of substances contribute to this worrying trend.

The impact of substance use in adolescents is profound, affecting their academic performance, mental health, and overall well-being. Recently two national policies namely *National School Curriculum Framework for School Education 2023*, (NCFSE-23) and the *National Education Policy 2020* have given more importance about the emerging adolescent issues to be addressed to the student for better health and well-being.

India is a home to the largest number of adolescents in the world i.e. 253 million (Census 2011). Recently India surpassed China to become the country with the highest total population in the world (U.N. Prospects, 2022). The key emerging issues like NCDs (Non-Communicable Diseases) among Indian adolescents is a matter of concern. Now as per NFHS -5 many are facing substance abuse, anxiety and exam stress, hypertension, emotionally disturbed and peer pressure, addiction of digital engagement for study and entertainment. Keeping all these issues in mind, this paper will explore the magnitude and types of substances that are used by school-going children of Jharkhand State of India. Students have been asked why they consume substances and the impact on their overall holistic health and educational activities.

As adolescent issues are shifting from decade to decade i.e., during 1980s more focus was given on how to control population, similarly during the 1990s the focus was shifted to ARSH (Adolescent Reproductive Sexual Health). Later, during the 2000s the focus was on mental health, suicidal tendency and peer pressure and bullying among school-going children. Recently, the focus is on health and well-being which is the need of the hour for our society. If a child is mentally, physically, aesthetically, socially and spiritually matured and does not have any deformity, then they be considered as well-being child for holistic development of them.

The healthy child and adolescent population can into a better demographic dividend for the country. This paper also sees the substance uses pattern and behavior of the children how they are engaging in this type of activities during schooling. We have to prevent them from such bad practices for their better healthy future life. School is the best platform to sensitize these issues on time age appropriately and before happening how we provide sensitization and equip better life skills among them through life skill and school- based student activities.

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Literature Review

Many factors make school-going adolescents the most susceptible to substance abuse. A study by Kannekanti, et al (2024), illustrates that school-going adolescents are primarily vulnerable to developing addictive behavior. Knowledge and attitude towards substance use can significantly influence or persuade against them from this behavior. The study further points out that the majority of adolescents believe that substance abuse harms family relationships, finances, the family environment and the family's social status. The majority of adolescents also believe that substance use addictions can be prevented and treated if proper care and guidance is provided at the initial stage. Also, they emphasised that people with an addiction should be supported and treated with compassion. The adolescents from private schools have better understanding regarding ill effect of substance abuse than those from public schools. *National Education Policy* (NEP, 2020) also advocate that special attention must be paid to safety and rights of adolescents especially girl children and the various difficult issues faced by them such as substance abuse, discrimination and harassment including violence with safe and efficient mechanism. The development of such effective mechanism should be on high priority.

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Another study by Dhawan et al (2017), shows that the street children in India are more vulnerable to substance abuse. Poverty, urbanization, disintegration of families and domestic violence are the most direct cause of this growing phenomenon. Further substance abuse is closely associated with child labor and it is more common in the marginalised children.

Nayak, D. (2016), report that a large number of adolescent boys were taking substances to reduce their tension, anxiety. They are also influenced by the substance user parents, by exposure through media, or by peer pressure. Most of the students agreed health education accompanied with prevention and treatment of substance abuse is much needed. Joseph, et al (2019), reiterate the similar findings that male are more prone for engaging in risk behavior and psychosocial factors such as religion, residence, family influence and severity of risk behavior produce different results for male and female adolescents. Arif Ali et al (2016) also report the similar evidence that there is prevalence of emotional and behavioral problems in tribal adolescent children due to substance abuse. There is inadequacy of appropriate mental health services in the rural areas. Therefore according to their cultural settings there is need to develop psychosocial programs for adolescents to promote the appropriate well-being.

Similarly Sujit Kumar et al (2017) report that emotional and behavioral changes in tribal adolescent population is significantly prevalent and needs social and professional concern. Necessary curative measures can be taken to prevent the various psychological and behavioral problems in tribal adolescents. Since tribal are having their own value system and different life style, they need a model of addressing such problems in a different manner. Poor mental health awareness, limited educational and other infrastructure and limited accessibility of resources make tribal adolescents an underserved population in our country. So there is need to develop appropriate mental health services in the rural areas to cater the social, physical, psychological and emotional problems of the adolescents.

Venu Gopal & Ashok (2012) also reported the prevalence of emotional and behavioral problems among tribal adolescents higher than non-tribal adolescents. High prevalence of anxiety/depression, somatic symptoms was also reported in tribal adolescents. Another study by Yadav J (2015), talks about substance abuse and its determinants among unmarried youth in India. Author points out that substance use was significantly high among the age group of 20-24 years. Various determinants such as substance use by caste/tribe, any member in family, paid work, and lower educational status were significantly associated with substance use. Further the prevalence of substance use was high among male youths as compared to female youths.

Adidela Praneet Reddy et.al (2014) conducted a descriptive study on prevalence and pattern of substance abuse among street children and adolescents among 603 street children and adolescents. Study reported the high prevalence among the age group 11-14 and dropped out of school adolescents. Smoking tobacco and inhalational abuse are more when compared to other types of substance abuse. Influence of peer pressure acted as the major factors of influence of drug abuse. More than half of the adolescents were aware about the ill effect of drug abuse.

Dr. Mridula Sharma and Moni Chaudhary (2011) conducted a survey on drugs and substance abuse among 110 adolescence boys of 12-16 years of slum dwellers. The study reveals that approximately half of adolescents of the slum are addicted to *gutka*, tobacco, smoking, alcohol etc. Around 55 per cent admitted to using drugs one time while less than ten per cent adolescents admitted they have craving for drugs. It is a serious concern among adolescents which shows an increasing trend in crude mortality rate among injecting drug users.

Stead et al (2009) explains the benefit of using multi effective approach in controlling substance abuse among adolescents. A multi-component approach involves extending substance abuse education from the school setting to the community setting accompanied with a range of

interventions. Access to substances in the community can be targeted. Education program for parents in school and community settings can be facilitated with an aim of ensuring that parents and adolescents receive the similar messages. Media campaigns by health services can help to promote messages about substance abuse. Local community support in preventing the substance abuse can play a significant role.

Another study by Tsering, D., Pal, R., & Dasgupta, A. (2010) try to assess the knowledge regarding adverse effect of using drugs and also discover the opinion of substance users regarding drug abuse. Study reveals that More than two-thirds of the respondents expressed a desire to quit substance use. 'Easy availability' and 'relief from tension' were the most frequent reasons for continuation of substance use. Level of knowledge on harmfulness of substance abuse among students was very high among urban adolescents as compared to rural. They stated media as the most frequent source of information.

Saxena V et al (2010) try to explore the habit pattern of substance user among boys' adolescents, 10th to 12th class from the four intermediate schools of the Doiwala block of Dehradun district. Study reveals that boys are recognized as a vulnerable group to substance abuse. In 75.5 per cent cases, friends were providing the substances. Approximately 80 per cent substance abusers expressed their desire to quit the habit. Further study advocate that there is need for developing a supportive environment involving both parents and teachers so that adolescent can decide and sustain with the right choices for healthy life.

Rationale of the study

Drug abuse among adolescents poses significant public health challenges. Recent trends indicate a rising prevalence of substance abuse among adolescents in Jharkhand. Understanding the extent and nature of this issue is critical for developing effective intervention strategies.

Adolescents are particularly vulnerable to substance abuse due to various developmental, social, and environmental factors. Therefore, it is imperative to understand the scope and dynamics of the problem. By understanding these issues, this study can suggest some targeted policies and programs that are culturally and contextually relevant.

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Research Questions

Q.1. What is the prevalence of substance abuse among adolescents in Jharkhand as per the latest NFHS-5 (2019-21)?

Q.2. How do factors like Gender, Social Category, Education, Place of Residence etc influence the rate of substance abuse among adolescents?

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Objectives

The objectives of the present study are listed below-

- To study the prevalence of substance use among adolescents across various social and demographic domains.
- To study the causes and consequences of substance use among adolescents
- Providing policy recommendations to mitigate substance use among school adolescents in Jharkhand

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Data Source

Data for the present study has been taken from the primary survey among school-going adolescents in Jharkhand surveyed by SCERT, Jharkhand, India.

Methodology

The study is based on the primary data collected from field survey. Total 94 sample of school going adolescents has been selected. Out of 94 adolescents, 27 have been identified as substance user. Various cartographic techniques such as Frequency, Cross-tabulation are used for depiction of prevalence of substance user. To understand the probability of using any kind of drugs across various independent variables, Binary Logistic Regression model has been applied. Adolescents using any kind of drugs have been taken as dependent variables while Education, Gender, Social Category, School location, family member as substance user, adverse impact on learning and stage fearlessness have been taken as independent variables. Dependent variable is coded as, for Using any kind of drugs (yes) = 1 & No=0 whereas independent variables have been taken as categorical variables.

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Results and Discussion

The present *research* aimed to *understand* the demographic profile of adolescents who use any kind of drugs. The study also tries to understand the impact of various social and economic variables on the probability of taking drugs among school going adolescents.

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Table 1: Caste-wise Substance User

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Social Category	Total No of Number of Students (n)	Substance User (n)	Frequency (%) of Substance User
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SCs	19	8	42.1
STs	20	4	20.0
OBCs	19	6	31.6
Generals	36	9	25.0
Total	94	27	28.7

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Source: Primary data collected from field survey

Out Table 1 show that out of 94 adolescents 27 adolescents (28.7%) are such who use any kind of drugs. Further it is evident that the proportion of substance user is highest (42.1%) among Scheduled Castes accompanied by Other Backward Castes (OBCs, 31.6%). The lowest proportion of substance user appeared in General category. Therefore it can be said that the prevalence of substance use is more among lower strata of the society (Table 1).

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Table 2: Percentage of Students used substance Gender-wise

S. No	Gender	Total No of Students	Substance User	% of Substance User
1.	Boys	49	15	30.6
2.	Girls	45	12	26.7
	Total	94	27	28.7

Source: Primary data collected from field survey

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Gender-wise substance user has been presented in Table 2. A clear cut gender differences among substance user is observed. Table 2 shows that the percentage of substance user among boys (30.6%) is higher than the girls. So it is obvious from the above table that boys are more prone to drug abuse rather than girls.

Table 3: Percentage of Students used substance by residence -wise

S. No	Place of Residence	Total No of Students	Substance User	% of Substance User
1.	Urban	60	12	20.0
2.	Rural	34	15	44.1
	Total	94	27	28.7

Source: Primary data collected from field survey

As for as place of residence is concerned, a largest proportion of substance user (44.1%) belongs to rural areas whereas only one-fifth substance user belong to urban areas. Therefore we can explicitly say that prevalence of substance use is more in rural areas as compared to urban areas (Table 3).

Table 4: Percentage of Students used substance by stages of schooling

S. No	Standard	Total No of Students	Substance User	% of Substance User
1.	Secondary (9-10)	21	6	28.6
2.	Senior Secondary (11-12)	73	21	28.8
	Total	94	27	28.7

Source: Primary data collected from field survey

Table 4 presents the cross tabulation between standard in which adolescents are studying and adolescents taking any kind of drugs. Study depicts that approximately equal percentage of the adolescents taking drugs at secondary level as well as senior secondary level. The table clearly points out that approximately 29 per cent adolescents are using any kind of substance at secondary as well as at senior secondary level.

Table 5: Binary Logistic Regression Analysis

Variables	B	S.E.	Wald	p-value	Odds Ratio
Education					

Secondary@					
Senior Secondary	.312	.648	.232	.630	1.366
Place of Residence					
Urban@					
Rural	1.431	.549	6.787	.009	4.181**
Gender					
Boys@					
Girls	.118	.518	.052	.820	1.125
Social Category					
OBC@					
SC	.163	.738	.049	.825	1.177
ST	-1.010	.831	1.480	.224	.364
General	-.486	.688	.499	.480	.615
Any family member use drugs					
Yes@					
No	-.909	.228	15.896	.000	.403***
Adverse effect on learning					
Agree@					

Disagree	1.056	.870	1.472	.225	2.875
Stage fearlessness by using drugs					
<i>Agree@</i>					
Disagree	-.644	.918	.492	.483	.525

Source: Primary data collected from field survey

@ -Reference Category

*** Significant at 1 percent significance level

** Significant at 5 percent significance level

* Significant at 10 percent significance level

Binary Logistic Regression Analysis

The probability of substance use across various social factors has been performed in Table 5 by applying Binary logistic regression model. From the above table, we can say that keeping all the other variables constant, the probability of being substance user among adolescents in rural areas are more than those who comes from urban areas. The result is also statistically significant at 5 per cent level of significance as the p-value is .009 which is less than 0.05. Further the likelihood of being substance user among senior secondary adolescents is 1.3 times higher than secondary students. Therefore, it could be said that the higher age adolescents are more prone to substance use.

As far as gender is concerned, the likelihood of being substance user among girl adolescents is more than the boys. This result is also supported by the latest NFHS-5 report where the

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proportion of using tobacco and alcohol consumption is higher among women than men. There are also social category wise variations among substance user. Keeping all the other variables constant, the probability of being substance user among Scheduled Castes adolescents is 1.1 times more than OBCs category adolescents. As compared to OBCs, the likelihood of being substance user among Generals as well as Scheduled Tribes is less.

The family environment had significant role in shaping the future of adolescents. Study point out that the likelihood of being substance user among adolescents is very less where none family member is substance user. The result is also statistically highly significant at 1 per cent level of significance as the p-value is .000 which is less than 0.05. In terms of adverse effect on learning, the likelihood of being substance user is more among those adolescents who disagree that there is any negative impact of taking drugs on their learning. Further the probability of substance use is less among those adolescents who believe that stage fearlessness can't be reduced by taking any kind of drugs.

Summary and Conclusion

The study has found the notable association between substance user and various social and demographic variables. A large percentage of adolescents, who are using any kind of drugs, belong to Scheduled Castes category while lowest proportion belongs to Scheduled Tribes community. At higher ages, the probability of being substance user is more than the lower ages. Further rural areas are more prone to using any kind of substance than urban areas. It could be said that due to easy availability of drugs in rural areas, the probability of using it is more among adolescents. There is an interesting finding that the probability of substance use among girls is higher than the boys. This finding is also supported by the latest NFHS-5 report which shows that in the last two successive surveys, the proportion of tobacco use and alcohol consumption

is more among women aged 15 years and above as compared to men. Further adolescents are more prone to substance use if there is presence of one or more substance user in the family. There is good awareness about the negative impact of taking drugs on the academic performance of the adolescents. The likelihood of being substance user is among those adolescents who know that it would hamper their study as well as their health.

Policy Recommendations

The phenomenal rise in drug abuse amongst children and adolescents has serious implications, adversely affecting their physical, psychological and mental health. In the long term it is affecting the economy and development of the country. Therefore it should be the highest priority for the State as well as the society to curb the substance abuse issue. There are some policy recommendations which are given below-

- Regular sensitization and life skill student based activities may be conducted by all schools.
- Implementation of comprehensive and applicable substance abuse education in school curriculum starting from the elementary levels.
- There should be community awareness campaigns through utilizing media, local events and community leaders.
- There should be programs to educate parents about the sign of substance abuse and effective communication strategies to discuss these issues with their children.
- Regular screening for substance abuse as a part of school health program should be conducted by trained health professionals.
- Increase the accessible number of treatment and rehabilitation centers for adolescents in Jharkhand.

- Develop specific policies for protection of adolescents from substance abuse accompanied with stricter penalties for those who supply drugs to minors.

Limitation of the Study

This study is a very small sample based primary study having less key variables on substance abusers among school going adolescents and no medical professionals/trained health officials were not involved in data collection process.

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