

# Assessment of Substance Abuse Among Adolescents in India: An Overview

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**Abstract:-** Substance abuse among adolescents in India is a pressing issue with far-reaching consequences for their physical and mental well-being. This review paper provides an overview of the assessment of substance abuse among adolescents in India, focusing on common substances such as tobacco, alcohol, opioids, cannabis, and marijuana. The paper examines the magnitude and demographics of the problem, prevalence rates, associated risk factors, and government measures taken to address the issue. Additionally, preventive measures, early intervention strategies, and harm reduction approaches are discussed. The findings underscore the urgent need for evidence-based interventions, increased awareness, and stronger treatment and rehabilitation facilities to effectively combat substance abuse among Indian adolescents.

**Keywords:-** Substance Abuse, Adolescents, India, Tobacco, Alcohol, Opioids, Cannabis, Marijuana, Prevalence, Risk Factors, Preventive Measures, Government Measures.

## I. INTRODUCTION

Substance abuse among adolescents is a significant public health concern with far-reaching consequences for individuals, families, and communities. Adolescence, the transitional phase between childhood and adulthood, is a critical period characterized by increased experimentation, peer influence, and susceptibility to risky behaviors, including substance abuse (1). The use and misuse of substances such as tobacco, alcohol, opioids, cannabis, and marijuana among adolescents in India have become an alarming issue that requires attention and comprehensive understanding.

### ➤ Substance Abuse Among Adolescents

Substance abuse refers to the excessive and harmful use of psychoactive substances, leading to negative consequences on physical and mental health, academic performance, social relationships, and overall well-being (2). In India, the prevalence of substance abuse among adolescents has been steadily rising, posing significant challenges for public health professionals, policymakers, and stakeholders (3). It is crucial to assess the extent of substance abuse, identify contributing factors, and develop effective prevention and intervention strategies tailored to the unique needs of this vulnerable population.

### ➤ Addiction in Adolescents:

*A Current Trend* Addiction in adolescents is a growing concern in today's society. Adolescents are at a higher risk of developing addiction due to their developing brains and the influence of peer pressure. Addiction can take many forms, including substance abuse, gambling, and technology addiction. The consequences of addiction can be severe, including academic failure, social isolation, and mental health issues. According to a study by the National Institute on Drug Abuse (4), approximately 70% of high school seniors have tried alcohol, and 50% have tried an illicit drug. Additionally, the use of e-cigarettes and vaping has increased among adolescents in recent years. The American Psychiatric Association (5) reports that 1 in 5 adolescents have a mental health disorder, which can increase the risk of addiction. Prevention and early intervention are crucial in addressing addiction in adolescents. Parents, educators, and healthcare professionals can play a vital role in identifying risk factors and providing support to adolescents. Treatment options, such as therapy and medication, can also be effective in addressing addiction. In conclusion, addiction in adolescents is a current trend that requires attention and action. By understanding the risk factors and providing support and treatment, we can help prevent and address addiction in this vulnerable population.

Table 1 - Use of substances by defined percentage of adolescents across India

Substance	Percentage of Adolescents Consuming
Alcohol	1.3%
Cannabis	0.9%
Opioids	1.8%
Inhalants	1.17%

[Source: National Survey on Extent and Pattern of Substance Use in India, 2019]

## II. MAGNITUDE AND DEMOGRAPHICS OF THE PROBLEM

The magnitude of substance use among adolescents in India is a pressing issue that warrants attention. The survey revealed that alcohol is the most widely used psychoactive substance. Nationally about 14.6% of the Indians consume alcohol (6). These findings highlight the urgent need for effective interventions and preventive measures to tackle the problem of substance abuse among Indian adolescents.

In 2019, the Ministry of Social Justice and Empowerment (MoSJE), Government of India, conducted the 'National Survey on Extent and Pattern of Substance Use in India'. National Drug Dependence Treatment Centre (NDDTC), AIIMS, New Delhi in collaboration with ten other medical institutions conducted this survey in 135 districts across the country among the age group of 10-75 years. According to the data, the prevalence of substance abuse among population aged 10-75 years was alarmingly high. The data collected from the survey, provides valuable insights into the demographics of substance use among adolescents. The data revealed regional variations in substance use patterns, with higher prevalence rates observed in certain states. For instance, the states of Punjab, Haryana, and Uttar Pradesh reported higher levels of substance use compared to the national average (7). These demographic variations underscore the importance of tailoring prevention and intervention strategies to specific populations and regions.

### III. COMMON SUBSTANCES IN USE IN INDIA

In India, several substances are commonly used among adolescents, contributing to the growing issue of substance abuse. According to the National Survey on Extent and Pattern of Substance Use in India 2019, alcohol, opioids, cannabis, and inhalants are among the most prevalent substances used by adolescents.

Alcohol consumption is another prevalent substance use behavior among Indian adolescents. The survey indicated that 1.3% of adolescents reported consuming alcohol in the past year (9). The accessibility and social acceptance of alcohol, combined with peer influence, contribute to the high rates of alcohol consumption among this population.

Opioids, including prescription painkillers and illicit substances like heroin, pose a significant risk to adolescents in India. The survey data showed that 1.8% of adolescents reported using opioids in the past year (10). The addictive nature of opioids and their adverse effects on physical and mental health necessitate targeted interventions and access to appropriate treatment services.

Cannabis use has also gained popularity among Indian adolescents. Approximately 0.9% of adolescents reported using cannabis and marijuana in the past year (11). The psychoactive properties of these substances and the potential for long-term cognitive and mental health effects highlight the importance of addressing this issue through education, prevention, and early intervention programs.

### IV. GENERAL SUBSTANCE ABUSE

A study conducted in eastern India among adolescent students examined the prevalence and associated risk factors of licit and illicit substance use. The findings revealed that approximately 23% of the students reported using at least one substance, with tobacco being the most commonly used (12). Factors such as peer influence, parental substance use, and academic stress were identified as significant risk factors for substance abuse among this population.

Research focusing on treatment-seeking Indian adolescent girls explored their substance use patterns and associated characteristics. The study found that these girls exhibited unique profiles of substance use, with high rates of alcohol and tobacco use compared to their male counterparts (13). Understanding the specific patterns and factors related to substance abuse in this vulnerable population is crucial for developing gender-sensitive prevention and intervention strategies. The UDAYA study investigated the impact of substance use by family members and the community on substance use among adolescent boys in India. The findings demonstrated a significant association between familial and community substance use and increased risk of substance abuse among adolescent boys (14). The study underscores the importance of addressing the broader social and environmental factors that contribute to substance abuse among adolescents.

### V. TOBACCO

The Demographic Health Survey (DHS) conducted in 2019-2020 in India sheds light on tobacco use patterns among different states. The survey findings indicated variations in tobacco use prevalence across states, with higher rates observed in states like Mizoram and Manipur (16). These findings highlight the importance of region-specific approaches in addressing tobacco use among Indian adolescents.

A comprehensive report on substance abuse in children and adolescents in India provides insights into the prevalence, risk factors, and consequences of tobacco use among this population (17). The report underscores the urgent need for effective prevention programs, awareness campaigns, and policy interventions to reduce tobacco use and its associated health risks among Indian adolescents. The Global Youth Tobacco Survey (GYTS) conducted in 2019 provides valuable insights into tobacco use among youth worldwide. The fact sheet revealed that approximately 14.5% of Indian youth aged 13-15 years were current tobacco users (15). The GYTS findings emphasize the need for comprehensive tobacco control measures and targeted interventions to reduce tobacco use among adolescents.

Table 2 Percentage of Adolescents Consuming Tobacco in Different Forms

	FEMALES	MALES
Population Percentage who uses any kind of tobacco	0.8	14.3
Population Percentage who smokes cigarettes	0.1	6.2
Population Percentage who smokes bidis	0.0	1.2
Number of females who smoke bidis/cigarettes	91	1,112
Population Percentage who smokes more than 5 times a day	19.6	15.7

## VI. ALCOHOL

A systematic analysis focusing on the population-level risks associated with alcohol consumption examined factors such as the amount consumed, geography, age, sex, and year. The study identified various risks related to alcohol consumption, including an increased likelihood of accidents, injuries, violence, liver disease, cardiovascular problems, and mental health disorders (18). Understanding these risks is crucial for implementing effective alcohol control policies and targeted interventions to mitigate the negative consequences of alcohol use.

A systematic review explored alcohol use patterns among adolescents in India. The review highlighted the high prevalence of alcohol use among Indian adolescents, with associated risks such as poor academic performance, engagement in risky behaviors, increased susceptibility to substance use disorders, and negative mental health outcomes (19). The findings emphasize the need for comprehensive prevention and intervention programs specifically tailored to address alcohol use among Indian adolescents.

The National Family Health Survey (NFHS) 5 data collected between 2019 and 2021 provides valuable insights into alcohol use in India. The survey offers information on the prevalence and patterns of alcohol consumption across different states and population groups, helping identify regional variations and specific demographic factors associated with alcohol use (20). Such data can inform targeted interventions and policies to address alcohol-related issues effectively.

Table 3 Percentage of Adolescents Consuming Alcohol Highlighting the Frequency

	FEMALES	MALES
Population % who drink alcohol	0.2	5.8
Almost everyday	6.3	4.3
About once a week	24.6	32.9
Less than once a week	69.1	62.9

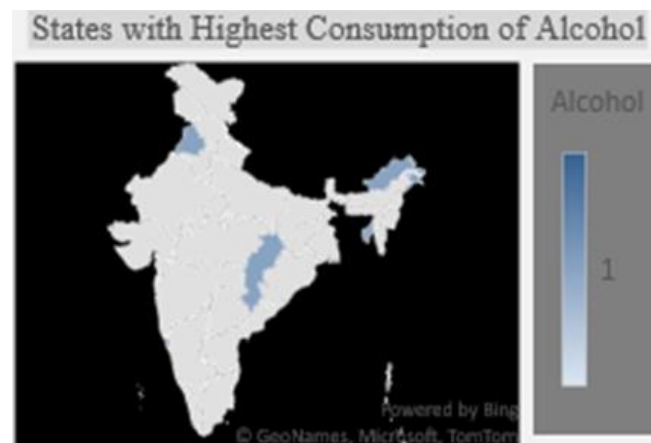


Fig 1 Highlighting the states of Arunachal Pradesh, Chhattisgarh, Tripura, Goa & Punjab with highest % of alcohol consumption

Source - National Survey on Extent and Pattern of Substance Use in India, 2019

## VII. INHALANT USE

An exploratory study focused on inhalant use, which refers to the intentional inhalation of volatile substances for their psychoactive effects. The study examined the prevalence, patterns, and associated factors of inhalant use among a specific population. Findings highlighted the significant risks and adverse consequences of inhalant use, including neurological impairments, respiratory problems, and addiction (21). Understanding the factors contributing to inhalant use can aid in developing prevention strategies and raising awareness about the dangers associated with this form of substance abuse.

A preliminary study conducted in North East India investigated inhalant use among school children. The study revealed the prevalence of inhalant use among this population and identified associated factors such as peer influence, curiosity, and lack of awareness about the health risks (22). The study highlights the need for early detection, prevention programs, and education campaigns to address inhalant use among school children.

The National Survey on Extent and Pattern of Substance Use in India 2019 provides insights into the magnitude of inhalant use among adolescents in India. The data from the survey sheds light on the prevalence and extent of inhalant use, contributing to a comprehensive understanding of the substance abuse landscape in the country (23). This information is crucial for developing targeted interventions and raising awareness about the risks associated with inhalant use.

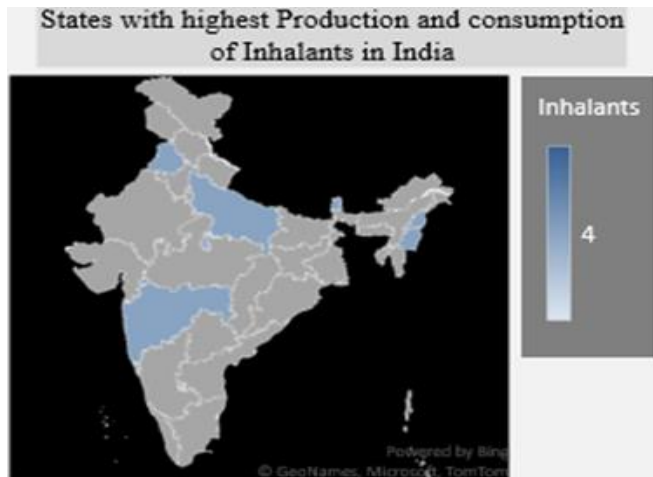


Fig 2 Highlighting the states of Punjab, Manipur, Sikkim, Nagaland, Maharashtra, Uttar Pradesh with highest % of production & consumption of inhalants

Source - National Survey on Extent and Pattern of Substance Use in India, 2019

**VIII. OPIOIDS**

Substance abuse in children and adolescents, including opioids, is a significant concern. Research indicates that early initiation of substance use, including opioids, can lead to long-term negative consequences such as addiction, cognitive impairments, and mental health disorders (24). Effective prevention strategies and early interventions are essential to address opioid abuse among children and adolescents.

The National Survey on Extent and Pattern of Substance Use in India 2019 provides data on the magnitude of substance use, including opioids, in the country. The survey findings reveal the prevalence and extent of opioid use among different age groups and regions (25). This data is valuable for understanding the scope of the opioid problem in India and developing targeted interventions.

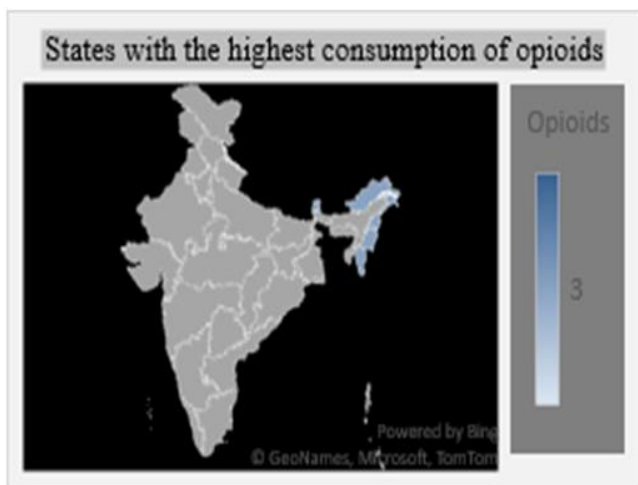


Fig 3 Highlighting the states of Arunachal Pradesh, Manipur, Sikkim, Nagaland, Mizoram, Uttar Pradesh with highest % of consumption of opioids

Source - National Survey on Extent and Pattern of Substance Use in India, 2019

**IX. CANNABIS**

Cannabis abuse is a significant issue among adolescents and young adults in India. Studies have reported high prevalence rates of cannabis use among this population, with associated risks including impaired cognitive function, mental health disorders, and increased susceptibility to other substance use disorders (26). Understanding the prevalence and associated factors of cannabis abuse is crucial for developing effective prevention and intervention strategies.

The National Survey on Extent and Pattern of Substance Use in India 2019 provides data on the magnitude of cannabis use in the country. The survey data offers insights into the prevalence, patterns, and regional variations of cannabis use among different population groups (27). This information is valuable for informing evidence-based interventions and policies to address cannabis abuse in India.

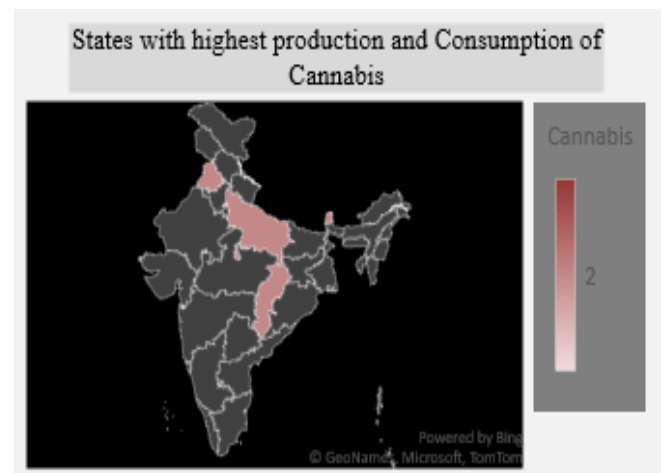


Fig 4 Highlighting the states of Chhattisgarh, Punjab, Delhi, Sikkim and Uttar Pradesh with highest % of consumption of Cannabis

Source - National Survey on Extent and Pattern of Substance Use in India, 2019

**X. MARIJUANA**

A study focusing on urban youth in India explored their experiences and expectations regarding marijuana use. The study identified various motivations for marijuana use, including curiosity, peer influence, and seeking pleasure or relaxation (28). Understanding the factors influencing marijuana use among urban youth can guide the development of targeted prevention and intervention strategies.

Drug addiction, including marijuana addiction, is a pressing issue worldwide. Understanding the current trends in drug addiction, including the use of marijuana, is crucial for effective management and treatment. Research on evidence-based approaches, such as behavioral therapies and pharmacological interventions, can inform the development of comprehensive treatment programs for individuals struggling with marijuana addiction (29).



## XI. PREVENTIVE MEASURES

Implementing preventive measures, early intervention, and harm reduction strategies are vital in addressing substance use among adolescents. These approaches focus on educating adolescents about the risks associated with substance use, promoting healthy coping mechanisms, fostering positive peer influences, and providing accessible counseling and support services (30). By targeting adolescents at an early stage, these measures aim to reduce the likelihood of substance abuse and its negative consequences.

### ➤ *Prevention of Substance Use in Children and Adolescent*

Substance abuse prevention refers to the steps taken to prevent the onset of substance use or limit the development of associated problems. Various steps have been taken by the Indian government to reduce the demand for drugs and prevent substance abuse.

The main aim is to empower the society and community in order to face the problem of substance abuse. For the primary level of prevention, the target is to promote health by encouraging drug abstinence and moderation in the consumption of alcohol. The secondary level of prevention targets the early identification of troubled people, and counseling the at-risk people to bring behavioral change. Treatment, rehabilitation, and reintegration of recovering addicts is a part of the tertiary level of prevention. Prevention programs specifically designed for children and adolescents play a crucial role in curbing substance use. These programs typically include evidence-based interventions delivered in educational settings, focusing on building resilience, enhancing life skills, fostering positive social relationships, and promoting healthy behaviors (31). By equipping children and adolescents with the necessary knowledge and skills, prevention efforts aim to prevent the initiation of substance use and reduce the overall prevalence of substance abuse.

## XII. GOVERNMENT MEASURES

### ➤ *Scheme of National Action Plan for Drug Demand Reduction*

The Government of India has implemented the Scheme of National Action Plan for Drug Demand Reduction to address substance abuse issues comprehensively. The plan focuses on prevention, treatment, rehabilitation, and capacity building in the field of substance abuse (32). It aims to create awareness, strengthen treatment facilities, and enhance the coordination between various stakeholders involved in combating substance abuse. The National Action Plan is a strategic framework that guides government efforts to reduce drug demand and promote a healthier society.

Another scheme implemented by the Government of India is the *Nasha Mukta Bharat* scheme which aims to provide the vulnerable districts (272 in number) having access to drugs and prevalence of substance abuse with drug de-addiction facilities. With that, the Indian government has a scheme for the prevention of alcoholism and substance abuse to provide the tertiary level of prevention which facilitates the early identification, counseling, treatment, and rehabilitation of addicts through voluntary organizations.

The Narco-Coordination Centre (NCORD) was constituted in November 2016 by the Government of India. The demand reduction strategy is under the Ministry of Social Justice & Empowerment in the Government of India and is responsible for the implementation of demand reduction activities in the country.

## XIII. CONCLUSION

In conclusion, substance abuse among adolescents in India is a significant public health concern that requires urgent attention. The magnitude of substance use, including tobacco, alcohol, opioids, cannabis, and marijuana, is alarming and has detrimental effects on the physical, mental, and social well-being of young individuals. The prevalence rates, associated risk factors, and patterns of substance use highlight the need for comprehensive preventive measures, early intervention strategies, and harm reduction approaches. The government's involvement through initiatives such as the Scheme of National Action Plan for Drug Demand Reduction is crucial in addressing the problem effectively. By implementing evidence-based prevention programs, promoting awareness, and strengthening treatment and rehabilitation facilities, we can strive to reduce substance abuse and create a healthier future for the adolescents of India.

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