

# Substance abuse in Children and adolescent: A Retrospective Study

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## Abstract

**Introduction:** Drug addiction among children and adolescents is spreading very fast. The age of initiation of substance use is falling progressively. **Aims and Methods:** The aim of the study was to know about the socio demographic profile of children and adolescents diagnosed with substance dependence and to assess the pattern of drug dependence. So we conducted a retrospective study in Swami Vivekananda Drug De addiction centre at Amritsar in Punjab. The diagnosis of substance dependence was made by a consultant psychiatrist after direct interview with the patient and the relatives according to International Classification of Diseases (ICD-10). **Results:** The study comprised 446 children and adolescents who reported for de addiction during the study period. Majority were in the age group 16-19(95.73%), 49.5% were from urban areas and 50.5% patients were from rural areas. Out of these 36.09% were employed, 24.43% were unemployed and 39.46% were students. Our results showed more involvement of male as compared to females. As far as education status is concerned, 47.53% studied up to matric, 23.99% up to Secondary school, 12.78% up to middle, 6.95% up to primary and 5.38% were illiterate. Opioids and polysubstance use are common among them. **Conclusion:** The need of the hour is to educate and counsel young children and adolescents and create awareness among the public regarding drug addiction.

**Keywords:** Adolescence, Opioids, Substance Use, Addiction

## Introduction

Child and adolescent substance use and abuse are highly significant public health problems. The World Health Organization (WHO) defines an adolescent as any person between ages 10 and 19 years. Consumption of illicit substances has increased all over the world and the age of initiation of use is falling progressively [1]. Substance use refers to the use of any psychoactive substances or drugs, which include licit and illicit drugs, other than which are medically indicated [2]. Substance use at a young age is usually associated with a poor prognosis and a lifelong pattern of irresponsible behavior [3]. Youth is a time for maximum experimentation and formation of identity. Use of tobacco, alcohol, and other substances is a problem

throughout the world and affects many children and adolescents [4]. It is estimated that, in India, by the time most boys reach ninth grade, 50% of them have tried at least one of the substance of the abuse nature [5]. Influence of peers and close contacts who use substances are usually responsible for initiating their use in others [6].

A Study was conducted on prevalence patterns and familial aspects of substance use among adolescents in North India and it was found that prevalence of substance use was seen in 52.7% students belonging to age group 19 to 21 years. More prevalence of substance use was found among law students (76.2%) followed by the students from Art stream (62.5%). Among the users alcohol was most commonly used (53.5%), followed by smokers (27.3%), tobacco chewers (8.2%), cannabis

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(6.8%).49% of the users were using substances on daily basis, followed by 23% who were using weekly. About 29.3% of users had father using any substance [7].

Today no part of world is free from drug addiction. It is fast spreading in each and every corner of world and India is also under the grip of drugs. Increasing population and nuclear system of families in India is also bringing changing patterns in its social and cultural values. It is very fast spreading in younger children and women too. Drug addiction in children impacts the whole family. In spite of being aware of the harmful effects of substance use, adolescents take up this habit.

The modeling of substance use behavior by parents, older siblings, and peers is a critical negative social influence [8]. Other powerful negative influences involve the media exposure that is the modeling of substance use and abuse by celebrities in movies, television, and music videos [9]. It has been found that school social environment that increase student participation, improve relationships and promote a positive school ethos may be associated with reduced drug use while students who are not engaged in school and those who fail academically are more likely to engage in substance use [10].

This requires comprehensive prevention and control programs in schools and the community, targeted toward adolescents and their parents and other family members. Effective measures are required to encourage shaping the attitude of school children toward self-confidence and adequacy, as also to prevent risk behavior among adolescents [11].

A study was conducted on prevalence and related risk factors of licit and illicit substances use by adolescent students in southern Taiwan. The prevalence of substance use was estimated as follows: alcohol drinking, 70.7% (boys 75.1%, girls 51.4%); tobacco smoking, 56% (boys 61.8%, girls 30.2%); illicit drug use 6.4% (boys 6.6%, girls 5.6%). Significant risk factors that emerged as common correlates with substances use were behaviour problems, non-negative attitude toward parent's substance use, and peer influence [12].

A Study was conducted on drug dependence in adolescents in north India and it was found that many adolescents came from nuclear family (63.5%), of urban background (83.5%) and were school dropouts (54.1%).

Mean age-at-first-use of the primary substance was 14.8 yr and mean age at first presentation was 17 yr. The commonest used primary class of substance was opioids (76.2%) and the commonest used opioid was heroin (36.5%). More than half of the subjects (54.2%) were also nicotine dependent at the time of presentation.

The most common reason for starting the use of drugs was curiosity (78.8%). About one-fifth (21.2%) of the subjects indulged in high-risk behaviour such as having sexual intercourse with multiple sexual partners. Nearly half of the subjects had positive family history of either drug dependence (40.2%) or psychiatric disorder (5.5%) [13]. A study conducted in united states of America shows that heroin use in adolescents is showing increasing trend [14].

### **Aim and objectives**

1. To study the socio demographic profile of children and adolescents with substance dependence.
2. To assess the pattern of drug dependence.

### **Material and Method**

A retrospective study was conducted at Swami Vivekananda Drug De addiction and Treatment Centre (SVNDDTC) of the Department of Psychiatry at the Government Medical College, Amritsar. The study protocol was approved by the Institutional Ethical Committee. Informed written consent was obtained from the patients prior to study as a routine procedure of the centre.

The study population comprised all children and adolescent patients who were registered in Swami Vivekananda Drug De-addiction and Treatment Centre (SVNDDTC), department of Psychiatry, Government Medical College Amritsar, during the study period (January 2013 to December 2015). The diagnosis of substance dependence was made by a consultant psychiatrist according to International Classification of Diseases (ICD-10) after direct interview with the patient and the relatives.

For all the registered subjects the available records were scanned and relevant information was retrieved according to a study specific predetermined coding plan. The information included was socio-demographic profile and substance use pattern. The clinical information was discerned from the recorded history and clinical evaluation.

**Excluded population-** Patients with mental retardation or organic brain syndrome (both determined by a clinical interview and examination by a qualified psychiatrist), or those who refused to give informed consent were excluded. None of the patients reported in this study were part of the previously published study from our centre.

**Measures-** An appropriate proforma was used to record age, sex, education, occupation, religion and

locality. This will include details of substances abused by the participants. Descriptive statistics were used for the demographic and clinical variables. Diagnosis of substance dependence was made according to the ICD-10 Criteria.

**Statistical analysis:** The data was evaluated using Microsoft Office Excel worksheet and percentage and proportions for every variable was calculated.

**Results**

**Demographic profile-** Total of 446 children and adolescents reported for de addiction during the study period from January 2013 to December 2015. Distribution among age group has been divided into two groups age 10-15 and age 16-19. Majority were in the age group 16-19 (95.73%). (Table 1)

**Table 1: Distribution among Age group.**

Year	Age 10-15 Years	Age 16-19 Years
2013	4	160
2014	9	177
2015	6	90

The patients from urban areas were 49.5% and 50.5% patients were from rural areas. (table 2). Out of these 36.09% were employed, 49.46% were unemployed and 14.43% were students. Majority were Sikh by religion, 47.53% studied up to matric, 23.99% up to secondary school, 12.78% up to middle, 6.95% up to primary and 5.38% were illiterate. Males were 99.77% and 0.22% females

**Table 2: Distribution among Rural and Urban Patients.**

Year	Rural	Urban
2013	91	73
2014	91	95
2015	43	53

**Clinical profile -**The most common substance of abuse was heroin and other opioids (58.74%). Others were tobacco used by chewing or smoking or both, alcohol, cannabinoids, inhalants. About 35.6% were polysubstance users and out of these 8.74% were having polysubstance >2 (Figure 1). Majority were non injection drug users (67.26%) and 32.74% patients were taking drugs by injection route. Out of the patients taking opioids 44.6% were put on agonist treatment that is bupernorphine and majority were put on detoxification treatment. The reasons for initiating substance use were peer pressure (68%), curiosity (12%) and frustration or stress (20%). The reasons for abuse were withdrawal symptoms (60%), peer pressure (37%) and stress (3%).

**Table 3: Distribution of different drugs.**

Drugs	Number	Percent
Heroin or ther opioids	262	58.74
Alcohol	3	0.67
Cannabinoids	8	1.79
Tobacco	14	3.14
Inhalants	1	0.22
Poly substance <2	120	26.91
Poly substance >2	38	8.52

## Discussion

The incidence of drug abuse among children and adolescents is higher than the general population. Heroin, Opium, Alcohol, Cannabis and Propoxyphene are the five most common drugs being abused by children in India. In India an NGO survey revealed that 63.6% of patients coming in for treatment were introduced to drugs at a young age below 15 years. This is notably because youth is a time for experimentation and identity forming. In developed countries drug abuse among youth is generally associated with particular youth subcultures and lifestyles. According to another report 13.1% of the people involved in drug and substance abuse in India, are below 20 years. A survey shows that of all alcohol, cannabis and opium users 21%, 3% and 0.1% are below the age of eighteen [15].

Substance abuse disorder is among the leading public health problems in modern day world as they cause a lot of human suffering in terms of morbidity, mortality and economic loss. Majority of the patients were Sikh by religion as the study was conducted in Punjab and the state caters to a large number of Sikh population. The substance abuse was more common in males in the study as compared to females as seen in earlier studies conducted in north India [16]. Also the research included only those patients seeking treatment at the de addiction centre, many females do not report or seek treatment because of pressure of society or stigma attached with it. The commonest substance of abuse recorded was opioids in our study and among opioids most common was heroin. It is supportive of earlier studies [17]. The most common reason for initiating substance use was peer pressure which is supportive of earlier studies [6,8]. It has also been seen in the study that number of patients have increased over the years and this indirectly indicates that problem of drug abuse is rising among the youth. This is in accordance with the earlier study conducted in north India [13]. Varma et al [18] found that rates of current use of alcohol in Punjab were 45.9% in Jalandhar and 27.7% in Chandigarh whereas it was 28.1% in rural areas of Punjab [19]. Shukla [20] reported that 38.3% of the rural population in Uttar Pradesh was habitual substance users. In a study conducted in rural community in Bihar prevalence of alcohol/drug use was found to be 28.8% of the study population [21]. The picture is grim if the world statistics on the drugs scenario is taken into account. With a turnover of around \$500 billions, it is the third largest business in the world, next to petroleum

and arms trade. About 190 million people all over the world consume one drug or the other [22,23]

**Suggestions:** There is an utmost need to educate and counsel young students and adolescents regarding harmful effects of substance use. Health education may be imparted by inclusion of this topic in the school curriculum. Parents should also be educated on discouragement of substance use and on taking proper care of their children.

**Limitations:** The result of our study must be seen within its limitations. The retrospective chart review entailed inferring relevant data from the recorded narratives. The sample comprised of children and adolescents seeking de addiction treatment at one centre. Hence, generalization of our findings to other de addiction centres and across the community and the country demands caution.

However within these limitations the study leads to the following conclusions. The children and adolescents seeking treatment for substance abuse were mostly in the age group of 16-19, majority males almost equally distributed among urban and rural areas and majority studied up to matric. The most common substance of abuse was heroin or other opioids impacting their lives and their family. This study may help us in understanding a rapidly increasing public health problem which is of national importance and for suggesting probable solutions for reducing this problem.

Understanding socio demographic and behavioral aspects of substance users will be helpful in reducing the risk which is caused due to substance use in the potential loss of lives of children and adolescents and their careers and also to their families and society in general.

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