

## Prevalence of Substance Abuse and Its Correlates amongst Street Children of Guwahati City, Assam

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### Abstract

**Background:** Children in the street of urban India are a common phenomenon and they are underprivileged and vulnerable. Such vulnerabilities may subsequently lead to substance abuse as an attempt to cope up with difficult situations Guwahati being the largest city of Northeast India share a great number of these children. This study will attempt to throw light on their lives on the streets and the problems they face. The main objective of the study is to assess the prevalence of substance abuse among street children and to know the Co relates of substance abuse in the study population.

**Materials and Methods:** The study is a community based Descriptive Cross- Sectional study done during the period of August 2019 to July 2020. Study was conducted among the street children of Guwahati city. Study population comprise of a sample of street children in the age group of 7 to 16 years. Sample size was calculated to be 380. Area as potential hotspots were listed before collecting data. From these hotspot children were selected through purposive sampling and snowball technique.

**Results:** Out of total 380 street children interviewed 224 (58.95%) Reported substance abuse. Majority of the children abuse smokeless tobacco (86.60%) and glue (80.80%). It was found that 62.95% children abuse more than one substance. Gutkha (67.86%) was reported to be the most common substance first introduced by them. The main reason for using substance were to suppress hunger (76.78%). More than half reported use for recreation and relaxation.

**Conclusion:** The prevalence of substance abuse among the children studied was 58.95%. Smokeless tobacco (86.60%) and dendrite (80.80%) were the most commonly abused substance alone or in combination. Children abuse substances mainly to suppress their hunger (76.78%) and due to influence by partners (75.89%).

**Keywords:** Substance abuse, Tobacco, Alcohol

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### Background

Children are the foremost valuable resource of a nation. It is estimated that India has the largest child population in the World with

472 million children below 18 years, equal to around 39 percent of the country's total population[1].

Rapid Urbanization and large-scale migration of individuals to cities have been witnessed within the previous few decades which led to the emergence of an urban phenomenon termed as street children. de Moura (2002) found that in North America and Western Europe the term “Homeless Children” is used while in Asia, Africa, Eastern Europe and Latin America the term “street Children” is predominantly used [2].

Children in the street of urban India are a common phenomenon and they are underprivileged and vulnerable. They are regarded as “Hidden” population. They are not covered in the national census, education or health data because of absence of any fixed address. These children in India are categorized under “Vulnerable groups in need of care and protection”[3]. The exact number do not seem to be known, as they are not recorded in any survey / study. The present statistics on the number are provided by different nations at different times and by different methods. In 1981 first estimate of street children in the World was brought to the public by the advisor of UNICEF and pioneered the term street children with a further distinction made in the year 1986[4]. A 5 city survey by Save the Children in 2016 namely Hyderabad, Patna, Howrah, Kolkata and Lucknow found 84563 children in streets of India[1].

It is a challenge for the adult to survive on the streets, hence the survival of the children is more difficult. Although they live within the city, they lack the comforts of urban life. These children live and work without adequate food, clothes and shelter[5]. They lack affection and social security. These difficult situations make them vulnerable to physical and mental health disorders[6]. Such vulnerabilities may subsequently lead to substance abuse as an attempt to cope up with difficult situations. Substance abuse was reported to be as high as 82.98%, the most common substance being nicotine as cigarettes/bidis and volatile substance[7]. In India, the street children are subjected to physical as

well as sexual abuse and are frequently held up by the police and other members of the civil society because they are homeless and lack of autonomy. The government rather than nurturing and protecting them treats them as a blight that is to be eradicated[8]. The risk of drug abuse and drug related morbidity in street children is more than the general population. The problem is aggravated by a large number of street children, which is estimated to be the largest in the world. Substance use and sexual abuse by the street children have been documented as two important socio-behavioural problems. These children are most difficult to be found by clinician, researchers and others concerned with understanding and improving their prevailing conditions. These individuals are the most to be benefited from drug abuse treatment and prevention efforts, but they are the least to be studied or understood.

Guwahati being the largest city of Northeast India share a great number of these children. Multiple factors including natural disaster like flood have led to constant migration of the poor to the city. The studies are not readily available in this part of the country. This study will attempt to throw light on their lives on the streets and the problems they face.

### **Aims and Objectives**

**Aim** To assess the prevalence of substance abuse and its correlates amongst street children of Guwahati city of Assam.

### **Objectives**

1. To assess the prevalence of substance abuse amongst street children
2. To know the Correlates of substance abuse in the study population

### **Materials and Methods**

**Study design:** Community based Descriptive Cross- Sectional study.

**Study Period:** August 2019 to July 2020.

**Study Area:** Study was conducted among the street children of Guwahati city of Kamrup Metropolitan district of Assam.

The area which are the main commercial centre of Guwahati City with the maximum concentration street children like railway station, bus stop, places of worship, shopping malls/ Complex, traffic signals, restaurants/ hotels and parks are included for the study. the areas selected were P.

**Study Population:** Study population comprise of a sample of street children in the age group of 7 to 16 years.

#### **Inclusion criteria for study population**

1. Those who were residing in the study area permanently for more than 3 months
2. Children willing to participate in the study
3. Children capable of giving answers themselves or through any close respondents.

#### **Exclusion criteria for study population**

1. Children living in any institution or shelter home
2. Children living alone who failed to comprehend the questions asked by the interviewer
3. Those not giving consent.

#### **Sample size calculation**

Considering 42% prevalence of substance abuse, 95% confidence interval and 5% absolute precision and applying the formula

$$N = (1.96)^2 pq / L^2$$

P= Prevalance, Q=(100-p), L=absolute error

$$\text{Sample size} = [(3.84) * (42) * (58)] / 5^2$$

Sample size was calculated to be 374.36 rounded to 380.

#### **Sampling design and Data Collection technique**

**Hotspot Identification:** Area as potential hotspots was listed before collecting data. Multiple visits on different days and different times were made to include the maximum number of children. All locations where more than 15 children were found together were taken as Hotspot[9] A total of 12 hotspot were identified, (Paltan Bazar,

Pan Bazar, Fancy Bazar, Bharalumukh, Maligaon, Jalukbari, Adabari, Ganeshguri, Beltola, Hatigaon, Bethkuchi and Machkhowa).

The street children were selected through purposive sampling and snowball technique. from the respective hotspot, all the children fulfilling the inclusion criteria were interviewed and thereafter their peers or other children from that area were searched with their help and later interviewed.

**Extended Hours:** Data collection hours were not kept fixed but were rotated day by day to ensure that children were not missed and working children could be interviewed in the evening once they had completed their work.

**Study variables:** substance abuse, characteristic of substance abuse, age of initiation, number of substance abuse, combination of substance, introductory substance, reason for abusing.

**Data collection tools:** P redesigned and pretested semi structured schedule.

**Operational definitions:** Substance Abuse: Substance abuse is defined as a maladaptive pattern of substance use leading to clinically significant impairment or distresses manifested by one (or more) of the following occurring within a 12-month period:

1. Recurrent substance uses in physically hazardous situation
2. Recurrent substance related legal problems
3. Continued substance uses despite having persistent or recurrent social or interpersonal problems caused or exacerbated by the effect of the substance.

**Analysis of Data:** Data collected was compiled in Microsoft Office Excel and analyzed by using an instant graph pad.

**Ethical consideration**

1. Before carrying out the study, ethical clearance was obtained from the Institutional Ethics Committee, GMCH
2. Informed consent before the interview was taken from the children or
3. their parents/ supervisors
4. Privacy and confidentiality of personal information was strictly maintained in every step of the study.

Methodological Issues: The street children were the source of information and following difficulties were faced during the data collection.

1. Rapport building and gaining their trust was hard to achieve
2. Street children would run away to attend to clients / customers
3. Children who work on streets were reluctant to respond as they were in continuous surveillance by their employers. Many blocked their access by assuring that they were 19-year-old and in some cases, employers restricted the interviews to be conducted
4. Interviewing the child was difficult when drunk or was under the influence of any substance
5. Corona virus pandemic was also played a crucial role in the process of data collection.

## Results

Out of total 380 street children interviewed 224 (58.95%) Reported substance abuse.

Majority of the children abuse smokeless tobacco (86.60%) and glue (80.80%).

Other commonly abuse substance were tobacco (67.41%), Erase-Ex (67.41%) and alcohol (59.82%). (Table 1).

It was found that out of 224 substance abused children, 141 (62.95%) children abuse more than one substance.

In table 2 It was also found that most common substances combined for abuse are smokeless tobacco and smoking (32.63%) followed by Tobacco and alcohol (25.53%)

From the study, it was found that Gutkha (67.86%) was reported to be the most common substance first introduced by them, followed by glue (20.98%). Beedi /cigarette (7.14%) and Alcohol (4.02%) was less commonly introduced substance,

From the study it was also found that Peer Pressure (78.57%) was the main reason for initiation of substance abuse, while other reasons for initiation were recreation (20.98%), curiosity (10.1%) and influence by family members (7.14%)

Among the different reasons for abusing substance, the main reason for using substance were to suppress hunger (76.78%). More than half reported use for recreation and relaxation. (Table 3)

It was also found that higher proportion of children (39.73%) abused substance 4-6 times per week followed by 38.39% abusing substance daily. More than half of the children obtained substance from their friends (62.05%) and by self (56.69%). only 10.71 % reported obtaining substance from their family members. Out of the total 380 children 178 (46.84%) reported consumption of substance by their parents/ family members.

**Table 1: Distribution of street children according to characteristics of substance**

Substance *	Number (n=224)	Percentage (%)
Tobacco (Cigarette/ Bidi)	151	67.41
Smokeless Tobacco	194	86.60
Glue (Dendrite)	181	80.80
Erase -Ex	151	67.41
Alcohol	134	59.82
Cough Suppressant	20	8.9

Ganja /Cannabis	23	10.26
Petrol	9	4.01

\* Multiple Response

**Table 2: Distribution of street children according to Combination of substance**

Combination of substance	Number (n=141)	Percentage (%)
Smokeless Tobacco + smoking	46	32.63
Tobacco +Alcohol	36	25.53
Tobacco +Inhalant	35	24.82
Tobacco +Inhalant +Alcohol	11	7.80
Tobacco +Inhalant + Smoking	13	9.22
Total	141	100.00

**Table 3: Different reasons for abusing substances**

Reasons *	Number (n=224)	Percentage (%)
To Suppress Hunger	172	76.78
Influence by Partner	170	75.89
Recreation	127	56.69
Relaxation	115	51.33
Overcome sorrows	91	40.62
Boost self confidence	71	31.69
Relieves Anger	53	23.66

\* Multiple Response

## Discussion

The Present cross-sectional study was conducted to find out the prevalence of substance abuse among the children in the age group of 7 to 16 years who were residing in Guwahati city, Assam, India

In the study out of total 380 street children interviewed, 224 Reported substance abuse. So, the prevalence of substance abuse among the street children were 58.95%. Study finding is comparable with the study done by Pagare D *et al.* (2004), Bal B *et al.* (2021)[10,11]. Benegal V *et al.* (1998), Gaidhane AM (2007), Reddy A (2014) and Kar S (2014) reported a higher prevalence of substance use / abuse whereas Naik P (2011), Meshram II (2015) and Ayub T (2017) found lower prevalence[4, 12-15].

Table 1 shows the distribution of street children according to the characteristics of substance abuse. Majority of the children abuse smokeless tobacco (86.60%) and glue (80.80%). Other commonly abuse substance were tobacco (67.41%), Erase-Ex (67.41%) and alcohol (59.82%). Ganja /

Cannabis was abused by 10.26% of Children and Petrol by 4.01%. Findings were comparable with the study done by Kar S (2014). Similar substances were reported to be abused by Benegal V (1998) in his study but with lower prevalence[4,12]. Similarly, lower prevalence of substance use / abuse was reported by Reddy A (2014), Meshram II (2015), Bhattacharjee S (2016) and Barman PJ (2016) with exception of cannabis abuse found to be higher in the study by Reddy A (2014) Bhattacharjee S (2016) and Barman PJ (2016)[4,15-16].

It was also found that out of 224 substances abused children, Majority (62.95%) children abuse more than one substance. This finding was comparable with the study done by Bhattacharjee S (2016)[16].

Table 2 Shows the Distribution of street children according to Combination of substance they abuse. The most common substances combined for abuse are smokeless tobacco and smoking (32.63%)

followed by Tobacco and alcohol (25.53%). From the study, it was found that Gutkha (67.86%) was reported to be the most common substance first introduced by them, followed by glue (20.98%). Beedi /cigarette (7.14%) and Alcohol (4.02%) was less commonly introduced substance. Similar type of findings were found in the studies done by Benegal V *et al* (1998), Naik P (2011), Barman PJ (2016), Bhattacharjee S(2016) and Ayub T (2017). Bal B (2010) reported the use of brown sugar and heroin along with other substance[10-17].

From the study it was found that Peer Pressure (78.57%) was the main reason for initiation of substance abuse, while other reasons for initiation were recreation (20.98%), curiosity (10.1%) and influence by family members (7,14%). Peer pressure was reported to be the main reason for the initiation of substance abuse in studies by Bal B (2010), Naik P (2011), Bhattacharjee S(2016)[11,14,16].

Table 3 shows the distribution of street children according to Different reasons for abusing substances. The main reason reported for using substance was to suppress hunger (76.78%) and influence by partners (75.89%). More than half reported use for recreation (56.69%) and relaxation (51.33%). Other reasons reported were to overcome sorrow (40.62%), boost selfconfidence (31.69%) and to relieve anger (23.66%). Benegal V *et al* (1998), Gaidhane AM (2008), Bal B (2010), Reddy A (2014) and Barman PJ (2016) found similar reasons for using substances[11-13, 18,19]. Meshram II (2015) also reported peer pressure as an important reason for substance abuse[18].

This study showed that higher proportion of children (39.73%) abused substance 4-6 times per week followed by 38.39% abusing substance daily. A study by Soni *et al* (2013) found a higher proportion of regular users of tobacco. Reddy A (2014) reported 23% smoked tobacco daily, 14% chewed tobacco daily, 26% drank alcohol

weekly, 7% abuse cannabis weekly and 27% abused inhalant daily[14], it was also found that more than half of the children obtained substance from their friends (62.05%) and by self (56.69%). only 10.71 % reported obtaining substance from their family members. Out of the total 380 children 178 (46.84%) reported consumption of substance by their parents/ family members. A higher proportion of substance abuse by the parents was found by Benegal V *et al* (1998), Kar S (2014) and Barman PJ (2016)[4,17,20].

### Limitation of the study

Substance use disorder (DSM-5) is a broader diagnostic entity which is an amalgamation of DSM-IV substance dependence and substance abuse, but the study focused only on substance abuse which is a part of the DSM-5 criteria of substance use disorder. Therefore, exhaustive coverage of the subject could not be done. Moreover, the results are based on the information given by the children who may have under reported because of social stigma attached to substance abuse. Keeping this in mind, the results of the study are to be viewed within the perspective of said limitation[21].

### Conclusion

The conclusions derived from the study are as follows.

1. The prevalence of substance abuse among the children studied was 58.95%. Smokeless tobacco (86.60%) and dendrite (80.80%) were the most commonly abused substance alone or in combination
2. Guthka (67.86) was the most common substance the children began with. The most common reason for initiation as well as for abusing substance was the peer pressure.
3. Children abuse substances mainly to suppress their hunger (76.78%) and due to influence by partners (75.89%). A higher proportion reported substance

abuse for the maximum number of days in the week

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