A STUDY ON PREVALENCE AND PATTERN OF SUBSTANCE ABUSE AMONG STREET CHILDREN AND ADOLESCENTS IN THE STATE OF ANDHRA PRADESH, INDIA

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ABSTRACT
Prevalence and pattern of substance abuse among street children and adolescents in Andhra Pradesh, India was observed using a prospective study, carried for six months in a total of 603 street children and adolescents. More prevalence observed among the age group 11 to 14 and dropped out of school. Smoking tobacco and Inhalational abuse are more when compared to other types of abuse. Correction fluid and glue’s are generally used by them as inhalants. The source of money was from working in small time jobs, begging. Influence of peer pressure acted as the major factors of influence for drug abuse.

Keywords: Street Children, Substance Abuse, Andhra Pradesh, Adolescents, Inhalational Abuse, Smoking Tobacco

INTRODUCTION
There are more than 100 million street children in the world. UNICEF estimated that India has 18 million street children which is the largest population in the world. A total of 300,000 street children are estimated to live in metropolitan cities of India such as Mumbai, Kolkata, Chennai, Kanpur, Bangalore, and Hyderabad (Railway Children, 2010). Andhra Pradesh, being one of the populous states in India shares majority of problems associated with street children (Saluja et al., 2007; Tripathi et al., 1999). UNICEF defines street children as children under 18 years old who spend most of their time on the street. UNICEF also presents three subcategories of street children: street living children, street working children and the children of street living families.
Street living children are those who live alone on the street. Street working children are those who work on the streets for their lively hood and return to their parents in the night. The third categories of the children are called the children of street living families who have no home, so live with their families on the street (Green et al., 1997).
Being in such difficult situations, street children are vulnerable to mental health disorders like depression and emotional, physical and sexual abuse etc. Such vulnerabilities may subsequently lead to alcohol and substance abuse (Ghosh 2009, Pagare et al., 2004). Substances are inexpensive and locally available which includes alcohol, inhalants (like glue and paint thinner), chewing tobacco like gutka. Injecting drug use is generally low among them. Some street children also use alcohol and drugs together (Carvalho et al., 2006).

According to the WHO, substance abuse is “persistent or sporadic drug use inconsistent with or unrelated to acceptable medical practice” (WHO, 1994). The present survey is an attempt in this direction, which will help to understand the demographic, socio-economic characteristics, patterns and trends of substance abuse and to identify factors associated with the abuse among the street children. The present study summarizes the identified characteristics of street children in different cities of Andhra Pradesh. Orphans, street children, child beggars, child victims of crimes, child offenders, children of prisoners, prostitutes, children with disabilities, sexually abused/ exploited children, children affected by HIV/AIDS etc are some important groups of children covered in this study. Street children are involved in harmful use of psychoactive substances. This can lead to over dose; increase the chance of accidents, violence, unwanted pregnancy and unprotected sex. The continued use of substances can lead to complications such as brain
and liver damage. The types of psychoactive substances street children use can be many and varied including alcohol, nicotine, Opioids, Hypnosedatives, Cannabis, Hallucinogens, Inhalants, Stimulants etc.

MATERIALS AND METHODS

Study Site
The study was conducted at children homes for boys, observation homes for boys, special home for boys in Warangal, Hyderabad, Vijayawada, Tirupathi, Vishakhapatnam, and railway stations of Warangal, Kazerpet, Hyderabad, Secunderabad, Kachiguda, Vijayawada, Trupathi, and Vishakhapatnam in Andhra Pradesh, India.
Observation homes/juvenile homes that act as “transit” homes in which Care, Protection, Treatment, Development, and Rehabilitation are provided. Officials of these observation homes along with local police bring street children to these homes, later return them to their families/guardians and if their parents are not traceable, the decision about the child future is taken by the Juvenile Welfare department.

Study Procedure
It was the prospective study carried out from March 2013 to August 2013. Prior to the study, necessary permission and formal letter was obtained from the Director of Juvenile Welfare Correctional Services and welfare of street children, Hyderabad, Andhra Pradesh, India. Formal consent was also taken from the Superintendents of the respective juvenile institutions.
Each child who was brought to the institution prior and during the study period was eligible and was interviewed. For the purpose of this study, substance abuse was conceptualized as use of substances (Tobacco, Alcohol, Cannabis, Inhalants and Other drugs) at any point of time in their life. Descriptive data about socio-demographic and socio-economic profile, information related to the family of the child and living arrangements prior to the homes, reasons for being on the street, problems being faced on the street, substance use and awareness of the consequences were recorded in the language of telugu (A widely spoken language in the state of Andhra Pradesh, India) using a questionnaire developed for this purpose. Additional qualitative information was also noted. The questionnaire was pre-tested on a sample of 10% of the actual sample size, which was modified, and all required changes were incorporated. Privacy was maintained during interview. Anonymity was maintained throughout data processing and analysis.

Inclusion Criteria
- Street children (male) age group between 6-18yrs.
- Children present in observation and special homes.
- Children who were willing to participate in the study.
- Children who were capable of giving answers themselves or through any close respondent.

Exclusion Criteria
- Female individuals.
- Individuals above 18 years.
- Those who were suffering from any major physical/mental instability.

Ethical Consideration
To assure adherence to the ethical Standards of epidemiological research, Procedures followed included:
- Informed consent of the interviewee;
- Ensuring privacy and confidentiality of personal information;
- Non-inclusion of subject's personal information in data files;
- Presentation of results in aggregate; form, without individual identification.

Informed Consent Form
Formal consent was taken from the Director of Juvenile Welfare Correctional Services and welfare of street children, Hyderabad, Andhra Pradesh and Superintendents of the respective juvenile institutions. All the boys were assured confidentiality and none was forced to undergo the study against his will.
RESULTS AND DISCUSSION

Results

A total of 613 boys willing for participation were enrolled. Ten were excluded due to mental retardation. The final sample consisted of 603 boys. Various parameters were studied and results were expressed below.

Distribution of Study Subjects according to Age

The mean age of the sample selected for street children is 13.63 years. Among 603 patients, highest numbers of street children were found to be between in the age group of 11-14 years (46.6%). Figure 1 show the distribution of study subjects according to age.

![Age Groups](image1.png)

Figure 1: Distribution of study subjects according to age

Distribution of Study Subjects according to Educational Background

Among 603 street children, 299 (49.6%) street children were dropped out of school, 182 (30.2%) street children were continuing education, and 122 (20.2%) street children were never been to school. High drop rate due to socio-economic reasons contributes to increased prevalence of substance abuse. Figure 2 show the distribution of study subjects according to educational background.

![Distribution of study subjects according to educational background](image2.png)

Figure 2: Distribution of study subjects according to educational background

Distribution of Study Subjects according to Family Background

Among 603 sample size, 298 (49.4%) street children were having both parents, 137 (22.7%) street children were not having a family, 109 (18.1%) street children were having only mother and 59 (9.8%) street children were having only father.
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were having only father. Though majority children have both the parents, the control and supervision was absent may be due to poor economic status, lack of awareness. Figure 3 show the distribution of study subjects according to family background.

Figure 3: Distribution of study subjects according to family background

Distribution of Study Subjects according to Reason for being on the Street
Most of the respondent children said that they left home because of domestic violence (30.4%) and deprivation of food (21.7%). Increased alcohol consumption, depleting social values, poor economic status and insecurity in life may contribute to ill treatment of children in the home. Figure 4 show the distribution of study subjects according to reason for being on the street.

Figure 4: Distribution of study subjects according to reason for being on the street

Distribution of Study Subjects according to Problems Faced by Street Children
Most street children of the sample interviewed (4.1%) stressed that violence represents a major problem they face on the street. 3.6% of the sample considered community disapproval as a major problem they
face on the street. Many street children (22.9%) fear that they might be arrested by the police, and in the process, be sent back to their families or to institutional care. Another major problem many street children (1.7%) expressed is their inability to save money while living on the street due to the threat of being robbed. 21.7% of street children explained that they suffer from many health problems while residing on the street. 1.7% of street children explained that they normally suffer from various psychological problems while living on the street, which are often associated with their inability to “cope with street life”. Almost 4.3% of the sample stressed that they suffer from the lack of attachment and affection. Majority of the street children (40%) stated that they don’t face any problem on the street and accustomed to the environment. A study conducted by Poornima also expressed the same (Poornima, 2007). Figure 5 show the distribution of study subjects according to problems faced by street children.

![Problems faced by street children](Figure 5: Distribution of study subjects according to problems faced by street children)

**Distribution of Study Subjects according to Substance Use**

Among the children interviewed, 71% (n=428) had indulged in substance use. In study conducted by Ray et al., 2009, 76.92% of street children were inhalant users. Sherman et al., also expressed similar results with 67.1% of street children reported having used drugs in the month before registering for Project. Both the studies are in agreement with our results. Figure 6 show distribution of study subjects according to substance use.

![Distribution of study subjects according to substance use](Figure 6: Distribution of study subjects according to substance use)
Distribution of Study Subjects according to Type of Substance Use

Among the users, smoking tobacco users were most common (48.9%), followed by alcohol users (40.6%), solvent users (31%), tobacco chewers (28.8%), cannabis users (14.9%), and other substance users (1.5%). No student reported injections as a source of drug abuse.

In a study of drug use among street children conducted by Benegal et al., 1998 reported that 76% smoked tobacco, 45.9% chewed tobacco, 48% inhaled volatile substances, 42% drank alcohol, 15.7% smoked cannabis, and 2% ingested opioids. Our study results are almost same in alcohol, cannabis and but contrast in tobacco users. Tobacco chewers were low in our study. Figure 7 show distribution of study subjects according to type of substance use.

Distribution of Study Subjects according to Frequency of Substance Use

Among 603 sample size, 23% of the sample smoke tobacco daily, 18% of the sample smoke tobacco weekly, 7% of the sample smoke tobacco rarely, 51% of the sample never smoke tobacco, 1% of the sample have no response of smoking tobacco, 14% of the sample chew tobacco daily, 7% of the sample chew tobacco weekly, 7% of the sample chew tobacco rarely, 71% of the sample never chew tobacco, 1% of the samples have no response of chewing tobacco, 4% of the sample drink alcohol daily, 26% of the sample drink alcohol weekly, 10% of the sample drink alcohol rarely, 59% of the sample never drink alcohol, 1% of the samples have no response of alcohol, 2% of the sample have cannabis daily, 7% of the sample have cannabis weekly, 6% of the sample have cannabis rarely, 85% of the sample never have cannabis, 27% of the sample have inhalants daily and 3% of the sample have inhalants weekly. 1% of the sample have inhalants rarely, 69% of the sample never have inhalants and 1% sample have others rarely and 99% of the sample never have others.

A study conducted by Soni et al., 2013 on tobacco showed that 49% were regular users, 32% experimented tobacco once, only 18% had never used tobacco in any form. These results were contrast to our study, showing non-tobacco users high in our study. A study conducted by Leticia et al., concluded that Regular use of alcohol shows differences among the subgroups of children. Eight percent of the children reported drinking alcohol beverages daily, as opposed to 26% weekly and 27% use rarely. Regular uses of drugs were reported by a lower number of children. Inhalants were more widely used by the street children (42%). Cannabis was used on a daily basis by 26% of the street children compared to a lower daily use reported by 4% of the children. Cocaine was not reported to be consumed in a regular
basis by the children interviewed, probably due to its high price. The same was observed in our study that smoking tobacco and inhalants had high prevalence in children. Again, a significant difference was found among the groups of children regarding the use of alcohol. Figure 8 show the distribution of study subjects according to frequency of substance use.

**Figure 8: Distribution of study subjects according to frequency of substance use**

**Type of Inhalants Used**
Among 187 sample size having inhalants, 132 (70.6%) sample has correction fluid, 20 (10.7%) sample having glue and 35 (18.7%) sample having both. The reasons for their high popularity is may be due to their availability and economic pricing. The above results indicate an urgent need to find alternatives for correctional fluid and promote usage of non-inhalant glues. Figure 9 show the distribution of study subjects according to type of inhalants used.

**Figure 9: Distribution of study subjects according to type of inhalant used**
Distribution of Study Subjects according to Reasons for Initiation of Substance Use

Substance abuse was further examined by asking respondents to identify the reasons that initiated them to use the various substances. The findings as summarized in the following figure, majority (54%) of street children initiated by peers, 33% started substance use for sake of pleasure. While 9% of them stated to forget sorrows, other 4% of them stated to get a sense of well being.

A study by Niaz et al., (32%), Margoob et al., (44.4%), Sarangi et al., (52.8%) and Sharma et al., (2012) it was found that the most common reason for indulgence into substance abuse was peer pressure followed by curiosity of taking drugs. However a study conducted by Tufeel, peer group pressure (26.3%) was identified as one of the important reasons for substance abuse. Figure 10 show distribution of study subjects according to reason for initiation of substance use.

**Figure 10:** Distribution of study subjects according to reason for initiation of substance use

Distribution of Study Subjects according to Positive Expectancies for Substance Use

Figure 11 show the distribution of study subjects according to positive expectancies for substance use. Among 428 positive expectancies for substance use are 105 (24.5%) sample are feeling happy, feeling of reduced pain, 25 (5.9%) sample use substances to forget sorrows, 47(11%) sample takes to decrease hunger, 6 (1.4%) sample takes them be alert, 34 (7.9%) sample expressed increased confidence levels after the abuse, 7(1.6%) sample takes them to participate in sex, 11 (2.6%) sample takes them to feel numb, 185 (43.2%) sample of children expressed combination of the above reasons for abuse. 8 (1.9%) children have no information or having no answer for intake of these substances.

**Figure 11:** Distribution of study subjects according to positive expectancies for substance use
In a study conducted by Meena et al., the most common reason cited for alcohol use was to be sociable (26.61%), to forget worries/ frustrations (22.95%), to think and work better (14.26%) and to cheer up (13.68%). Proportions of these reasons may vary from one society to another due to cultural heterogeneity, but overall our study results matched with studies conducted in this direction. Figure 11 show the distribution of study subjects according to positive expectancies for substance use.

**Distribution of Study Subjects according to Age at Initiation of Substance Use**

The minimum age at starting substance use in our study was 11.56 years. Among 428 sample, 207 (48%) sample initiated abuse of substance at age group of 12-14years, 176 (41%) sample initiated abuse of substance at age group of 9-11years, 23 (6%) sample initiated abuse of substance at age group of 6-8 years and 22 (5%) sample initiated abuse of substance at age group of 15-17years.

Lukoye et al., The mean age at first alcoholic drink was 17.5 years, with the youngest reported age being11 years. Otieno and Ofulla also found the highest prevalence of alcohol use among young people aged 16-17 years. Several other studies have reported early age of onset of alcohol use among adolescents and the associated psychological problems in later life.

A study conducted by Hazarika et al., Mean age at start of taking tobacco and alcohol use was found to be 20.1 years and 21.6 (±7.2) years respectively. Mean duration of tobacco use by the users were 18.9 (±6.9) years and that of alcohol use mean duration of the users were found to be 17.4 (±6.3) years. In contrast to our study, Umesh, 2006; Bhojani, 2009 reported that most of the regular users initiate at the age of 15 years. This clearly shows that the age of initiation is coming down from 15 years to 12 years. Figure 12 show the distribution of study subjects according to age at initiation of substance use. This is very alarming and shows lack of control over selling of these substances like alcohol to children and adolescents.

![Figure 12: Distribution of study subjects according to age at initiation of substance use](image)

**Distribution of Study Subjects according to Partners in Substance Use**

Among 428 sample size, 223 (52.10%) sample had substance use with friends, 182 (42.52%) sample had substance use alone, 19 (4.43%) sample had substance use with other users and 4 (1%) samples had substance use with family members/relatives. Figure 13 show the distribution of study subjects according to partners in substance use.

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Figure 13: Distribution of study subjects according to Substance use with

Distribution of Study Subjects according to Awareness of the Ill Effects Due to Substance Abuse
Among 428 sample, 226(52.80%) sample were aware about their ill effects and 202(47.19%) sample were unaware about their ill effect. Figure 14 show the distribution of study subjects according to awareness about ill effects.

Figure 14: Distribution of study subjects according to awareness about ill effects

Distribution of Study Subjects according to Timing of Substance Use
Among 428 sample, 257(60%) sample had substance use at anytime, 139(32.5%) sample had substance use at the time of evening, 29(6.8%) sample had substance use at night time, 2(0.5%) sample had substance use at the time of afternoon and 1(0.2%) sample had substance use at morning time. Figure 15 show the distribution of study subjects according to timing of substance use. We expected the usage of these substances in the night to maintain secrecy, but the substance abuse was observed in daytime too. This indicates lack of supervision on these children.

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Figure 15: Distribution of study subjects according to timing of substance use

Distribution of Study Subjects according to Source of Money for Getting Substance

Children were interviewed regarding their source of money for buying these substances for abuse. The primary source of income for the majority of children was working in the street (37.5%), followed by begging (35.5%). Other sources of income included are (3.03%) rag picking on the street. 20.32% of children reported involvement in minor crimes such as pick pocketing etc., 3.73% of the children interviewed also reported other sources like involvement in the peddling of drugs such as Hashish etc. Figure 16 show the distribution of study subjects according to source of money for getting substance.

Figure 16: Distribution of study subjects according to source of money for getting substance

Distribution of Study Subjects according to Ever Tried to Stop Substance Use Previously

Figure 17 show the distribution of study subjects according to ever tried to stop substance use previously. Among 428 sample, 331(77.3%) sample are not yet tried to stop substance use, 88(8.9%) sample were tried once but not succeeded, 54(12.6%) sample were still trying but not controlled and 5(1.2%) are able to control.

A study conducted by Sharma et al., (2012) also revealed the similar facts. Though the street children had tried to stop the use of substance abuse, few factors were influencing them to restart the drugs.
Figure 17: Distribution of study subjects according to ever tried to stop substance use previously

**Distribution of Study Subjects according to Want to Get Rid of Addiction**

Figure 18 show the distribution of study subjects according to their desire to get rid of addiction. Among 428 samples, 244 (57.01%) sample want to get rid of addiction, 184 (42.99%) sample doesn’t want to get rid of addiction. All the children who involved in substance abuse need to be provided with medical, psychological and emotional support. Active engagement of those children in education (Enrolling in the nearby community schools instead of conducting tuition classes in juvenile homes), sports and games may positively influences the children.

Figure 18: Distribution of study subjects according to want to get rid of addiction

**Conclusion**

The prevalence of substance abuse is alarmingly high among street children in Andhra Pradesh. Influence of peer pressure acted as the major precipitating factor for drug abuse in street children. Abusive substances like, tobacco, alcohol, cannabis, inhalants, others were abused to get relief from pain, to get confidence initially. Prevalence of substance abuse was high among the age group between 12-14 years (48%), followed by 9-11 years (40%). Initiation of substance abuse by majority of the children (52.10) was influenced by their friends. Street children (52.8%) are well aware of the consequences including effect on health. Although time consuming and requires large sum of money, overhauling of children support services are required which includes identification of root causes of the problem i.e poverty and illiteracy of the parents. Awareness among shop keepers, strict vigil on availability of commonly used substances pay provides immediate relief.
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