



A Study of Medico-Social Problems, Morbidity and Nutritional Status of Street Children in Nagpur city

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Abstract

Background: As per UNICEF street children are those for whom the street has become his or her habitual source of livelihood. In India 100-150 million Globally and 1.8 million children are currently either living or working on the street. They Lack of access to nutritious food, sanitation, and medical care. Their exposure to adverse weather, crime, overcrowding in shelters, unusual sleeping accommodations, poor hygiene and nutritional status, alcoholism and drug abuse leads to medico-social problems.

Objectives: The study is planned with the purpose to find out health and medico-social problems as well as nutritional status of street children.

Methods: A community-based cross-sectional study was conducted from June to August 2017 in 4 “footpath Shala “of Nagpur city. Total 87 Street children between 5-18-year age group were randomly included after parent’s/caretaker’s informed consent. Information regarding sociodemographic characteristics, Personal

habits, Morbidity, Abuse, Immunization status and Criminal activities was collected. Anthropometry was done.

Results: Out of 87 street children, 68.96% were between 5-10 years, mostly male 55.17% . About 79.31% from Joint families ,89.99% living on footpath , 44.83% involved in Garbage picking, 89.76% don’t use toilets, 51.72% didn’t follow hands washing and 79.31% didn’t bath daily .Un-immunized were 48.28% and 58.63% were undernourished. Physical abuse was experienced by 86.21%, Verbal abuse 72.42%, Sexual abuse 6.90%, Addiction 31.03% and most common was tobacco. Dental carries were most common morbidity 75.86%.

Conclusion: Thus street children need basic facilities and attention for their daily needs and physical, mental and social development. As they follow unhygienic practices they are susceptible to common infection. Addictions are common in street children leading to behavioural problem and criminal acts. They are also exposed to physical, verbal and sexual abuse.

Keywords: street children, morbidity, nutrition, abuse, personal habits

Introduction- The United Nations Children's Emergency Fund (UNICEF) defines street children as "Children for whom the street has become his or her habitual source of livelihood; and also, who is inadequately protected and supervised, as well as directed by responsible adults"¹. Street children are the one which developed themselves, without a roof and without roots....."roofless and rootless".

The global trends reflect that around 100-150 million children are currently either living or working on the streets and this number is further increasing²⁻⁴. Street children as estimated by the last census of the Government of India were 1.8 million⁵. According to UNICEF, about 72% of the street children were aged 6–12 years and 13% were aged below 6 years⁶. Most street children are not orphans. Many are still in contact with their families and work on the streets to augment the household income. Many others have run away from home, often in response to psychological, physical or sexual abuse. The majority of street children in India are boys than girls⁷.

The education of street children in India is very poor and often nonexistent. A study of street children in Bombay in 1989 found that 54.5% had never been enrolled in school and 66% of the children were illiterate⁸. A 2004 study of street children in Bombay revealed that circumstances were largely the same: 60% of the children had never attended school and approximately two thirds were illiterate⁷. They also lack basic education and vocational training opportunities^{9,10}.

Many factors are known to have contributed to the health problems of street children. The list includes: exposure to adverse weather, crime, overcrowding in shelters including unusual sleeping accommodations, poor hygiene and nutritional status, alcoholism and drug abuse. Due to

these street children have high rates of developmental, emotional and nutritional problems¹¹.

The study was planned with the purpose to study the socio-demographic factors, medico-social problems, various morbid conditions and the nutritional status of street children in 5-18-years age group.

Material and Methods: Observational Cross-sectional study was conducted at Four footpath Shala in different areas of Nagpur city from June – August 2017 among the street children of age group between 5-18 years. All Street children between 5-18-years age group whose parent/caretaker had given informed consent were included in study and those who had spent <3 months in the streets. Those, having behavioral disturbances, cognitive impairment (difficulty understanding questions) and auditory or verbal dysfunction (difficulty in communicating) and children in a state of severe drug intoxication, aggressive behavior were excluded from study. Informed consent was taken from parent/caretaker along with the children. The purpose and nature of the study was explained to the parents and interview technique was used to collect the data. Ethical committee approval was sought before the start of the study.

A study conducted by Indrapal I. Meshram et al in South India concluded that the prevalence of Anemia was 54 %¹⁹.

Using this prevalence, with 95% confidence interval and 5% absolute precision the sample size we found was 86. $L = \text{admissible error} = 20\% \text{ } p = 10.8$ Therefore, $n = 4 \times 54 \times 46 / (10.8)^2 = 85.18$. The minimum sample size is 86. The sample size 87 was taken.

The age of the child was confirmed by parents or by the caretaker or by the immunization card. An anthropometric measured weight was recorded with weighing machine with 100 grams least count. The height was recorded by long stretchable tape with 1cm least count. The nutritional status was counted on the basis of BMI (Body Mass

Index) to evaluate growth of children. The nutritional status was classified by CDC classification for BMI percentile for age and sex¹⁸. Street children with BMI less than 5th percentile, 5th-85th percentile, 85th-95th percentile and more than 95th percentile was classified as underweight, normal, overweight and obese respectively.

Data Collection and Analysis

The data was collected by using preformed, prestructured questionnaire.

Confidentiality of study subject was maintained. A sampling frame was done by selecting all the street children from 4 footpath Shalas and samples was collected by simple random sampling using table-of random numbers.

Sociodemographic characteristics like age, sex, duration and reason for being on the street, place of stay at night, income, expenditure, nature of work, family background, leisure time activities, education, other skills, deviant behavior and habits, awareness of legal provisions, abuse / exploitation, health conditions of street children were enquired. Anthropometry data including height, weight and BMI was taken.

The data was entered in MS EXCEL 2010 and was evaluated using SPSS Version 20.0.

The qualitative data like demographic factors, medico-social factors was represented in the form of table, frequency and percentage, graphs (Pie chart). The quantitative data like age, BMI was analysed.

Results

Table no.1 Age and sex distribution of street children.

AGE GROUP	Sex				Total
	MALE		FEMALE		
	NO.	%	NO.	%	
5-10	27	45.00	33	55.00	60
10-15	18	75.00	6	25.00	24
>15	3	100.00	0	00.00	3
Total	48	55.17	39	44.82	87

Chi square value=8.763, df -2, p value=0.01

Table no 1 shows that a majority 68.96% of the street children were in the age group of 5-10 years. The number of street children in age group 10-15 years and >15 were 27.58% and 3.44% respectively. The number of boys were more, 55.17% and the difference is statistically significant (Chi square value=8.763, df -2, p value=0.01)

Table no. 2 Socio-demographic profile of Street children

Socio demographic characteristics	Frequency	Percent
Family type		
Joint	69	79.31%
Nuclear	18	20.69%
Religion		
Hindu	84	96.55%
Non -Hindu	3	3.45%
Living condition		
Under bridge	9	10.34%
Footpath	78	89.66%
No. Of siblings		
1	15	17.24%

2	24	27.59%
3	27	31.03%
4	18	20.69%
6	3	3.45%
Attending School		
Yes	72	82.76%
No	15	17.24%
Working pattern		
Street hawker	6	6.90%
Gabbage picker	39	44.83%
Vehicle washer	3	3.45%
Domestic servant	9	10.34%
Begger	30	34.48%
Total	87	100.00%

Table no. 2 shows high percentage of street children belong to Hindu religion (96.55%) and only 3.45% were non-Hindu. Most of the street children were living with joint family, 79.31% and only 20.69% with nuclear family. Most of the street children lived on footpath, 89.66% followed by underbridge 10.34%. The number of siblings to street children were 3 (31.03%) and 2(27.59%). In the present study 82.76% used to attend Footpath Shala . The working pattern of street children mostly included garbage picker 44.83%, begging 34.48%, domestic servant 10.34%, street hawker 6.90% and vehicle washer 3.45% respectively.

Table no. 3 Distribution of street children according to personal habits.

Handwashing before eating	Frequency	Percent
No	45	51.72%
Yes	42	48.28%
Uses toilet	Frequency	Percent
No	78	89.66%
Yes	9	10.34%
Daily bath	Frequency	Percent
No	69	79.31%
Yes	18	20.69%
Addiction	Frequency	Percent
No	60	68.97%
Tobacco	27	31.03%
Drinking water supply	Frequency	Percent
Railway station	78	89.66%
Mental hospital	6	6.90%
Corporation	3	3.45%
Meal frequency	Frequency	Percent
1	3	3.45%
2	51	58.62%
3	30	34.48%
4	3	3.45%
Total	87	100.00%

Table no 3 shows that most of the street children were unhygienic. A highPercentage of street children do not wash hands before eating 51.72% andDefecate in open

space 89.66%. Street children didn't take bath daily 79.31%.The result of various addiction was unexpected, only 27% were addicted to tobacco. The drinking water supply of street children was poor. They mostly drink water from railway station water filter 89.66%. Meal frequency of street children were mostly twice a day, 58.62% followed by three times a day in 34.48%. Out of 87 street children (48.28%) were unimmunized whereas (41.37%) partially immunized and (10.37%) fully immunised.

Table no. 4 Distribution of Street children as per Abuse

Form of abuse	Frequency	Percent
Verbal abuse	63	72.42%
Physical abuse	75	86.21%
Sexual abuse	6	6.90%
Total	87	100.00%

Table no 4. Shows the various forms of abuse and exploitation of street children in the present study was physical abuse 86.21% most prevalent followed by verbal abuse 74.42% and sexual abuse 6.9%.

47.13% street children were exposed to criminal activities of them 73.15% were involved in begging and 26.85% in theft .

Table no. 5 Distribution of Street children according to Body mass index (BMI)

BMI Group	Frequency	Percent
Normal	29	33.34%
Obese	1	1.14%
Overweight	6	6.89%
Underweight	51	58.63%
Total	87	100.00%

Table no.5 shows that Nutritional status of street children showed that most of street children were underweight, 58.63% and small percentage were overweight, 6.89% and obese, 1.14%.

Table no. 6 Morbidity distribution in Street children

Morbidity	Frequency	Percent
ANAEMIA	36	41.38%
SKIN INFECTION	48	55.17%
ABDOMINAL PAIN	9	10.34%
DENTAL PROBLEM	66	75.86%
VIT A DEFICIENCY	6	6.90%
URTI	8	9.19%
Total	87	100.00%

Table No. 6 included details about morbid conditions of street children. Most of the street children suffered from anemia, 41.38% and various skin infections, 55.17%. Abdominal pain was seen in few numbers of street children ,10.34%. Dental problem was main problem in street children, 75.86% includes mainly carries in teeth because they don't brush their teeth daily. URTI in 9.19 %, Vitamin A deficiency was seen in a few street children 6.9%.

Discussion

In the present study, 82% street children attended schools run by local NGO under name Footpath Shalas, in contrast Abdul Hai¹⁴ stated that most of the street children are non-school going ¹⁴. It was observed that about 89.66% street children do not use toilet .Similar studies also observed that street children select open places for toilet such as rail tracks ,road sides etc ¹⁴. Similar to our study, most of street children were working as garbage picker and street hawkers ¹⁴. Our study showed contrast results in

addiction that only 27% street children were addicted to tobacco whereas Kaushiki S et al²¹ found addiction of tobacco in 69.70% in street children. The results in our study may be contrast due to good influence of NGO footpath Shalas on street children or street children may be afraid to give information. Shrivastava M¹⁷ et al also supported our results that most common form of abuse was physical abuse 78% as to compared to our results 86% and while sexual abuse was present 15% in comparison to our results 6.90% of street children¹⁷. About 58.83% street children were underweight and 33.34% were normal. Various other studies also supported the results that street children were underweight up to 61.70% and 38.30% were normal weight^{16,17}.

In our study, prevalence of anemia is 41.38%, similar to the study conducted by Majumdar M²⁰ et al , 41.04%. Current study found that many street children suffered from various skin diseases and similar results were found in Abdul Hai ¹⁴study in Bangladesh.

Conclusion

It is concluded from the present study due to lack of knowledge and facilities, the street children follow unhygienic practices they are susceptible to common infection. Their living condition and working pattern is bad. Basic medical facility like immunization is not available. They are involved in criminal activities. Some street children are addicted to tobacco. They are exposed to physical, verbal and sexual abuse. Most of them were suffering from undernutrition, anemia, skin infection, abdominal pain, dental problem and Vit. A deficiency because of poor nutrition and poor personal hygiene.

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