

## Morbidity Pattern and Nutritional Status of Child Rag Pickers of Dhaka Metropolitan City in Bangladesh

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### Abstract

**Background:** Child rag pickers in Dhaka city are increasing and very little known about their conditions and nutritional status. They lead a very vulnerable life and high risk of prone to different kinds of diseases.

**Objective:** The main objective of this study was to assess the morbidity pattern and nutritional status of child rag pickers of Dhaka metropolitan city in Bangladesh.

**Methods:** This descriptive type of cross-section study was conducted among purposively selected 300 child rag pickers age between 6 to 17 years. Data were collected through face-to-face interview by using semi-structured questionnaire. Nutritional status was determined by Z-score. Descriptive statistics was used to analyze data and presented in table.

**Results:** About 45% respondents had suffered from fever and 14.7% had suffered from abdominal pain during last three month period mostly. About 7% rag-pickers reported that they had sexually abused in different times during last three months where girl was much higher than boys. At the age of 6-9 years 6.51% Rag pickers were severely stunted, 15.5% were severely stunted at 10-13 years and at the age of 15-17 years 47.5% rag pickers were severely stunted.

**Conclusion:** Child rag-pickers were suffering from high morbidity and low nutritional status. Necessary steps should be taken to reduce their sufferings otherwise they will become a burden for the country in future.

**Keywords:** Rag picker; Morbidity; Nutritional status

### Introduction

Bangladesh is one of the most densely populated countries in the world and containing more than 154 million peoples [1]. Among them 27.7 million are age between 10-19 years [2]. As a result of high urban population growth rate there is an increased poverty in urban areas. Out of Dhaka's population of 15 million [3,4], an estimated 1.59 crore are below the poverty line [5]. In Bangladesh numerous children live as street children in the big cities and towns particularly in Dhaka City. They live an inhuman life and a significant portion of them are involved different kinds of activities [6]. According to UNDP report it is estimated that the number of street children in Bangladesh is currently over 600,000 of which 75% are in Dhaka city and estimated that in 2014 the number of children in a street situation was 930,000. There is growing warning that the number of the street children is set to raise as the urban population grows. All categories

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of street children are called Tokai ('rag pickers') by the general public, although they may be engaged in a range of petty trading/employment/criminal activities. Average daily income of street children is approx. USD \$0.55 [7]. The rag pickers fall into several categories, often related to the socio-economic conditions that led to their situation. Many children live with their families, either on the streets or in slum houses. Other children live on their own because they have been orphaned or abandoned by their parents. Children also run away from their families or care givers, fleeing poverty and physical abuse, and end up living and working alone on the streets [8]. The rag pickers lead a very risky life. They have an unstable childhood, face physical and sexual abuse by adults, harassment of law enforcement agencies and have no access to education or health care facilities as well. Study reported that these child rag pickers are often infected by various germs and suffer from various diseases caused by wastes including medical wastes. They commonly suffer from diarrhoea, dysentery, hepatitis and skin diseases as well [9]. Moreover their nutritional status is not so good as well as has poor immune system which leads to develop different kinds of diseases. The morbidity patterns of child rag pickers and their nutritional status are widely unknown. The aim of this study was to assess the morbidity pattern and nutritional status of child rag pickers of Dhaka metropolitan city in Bangladesh.

### Methods

This was a descriptive type of cross-sectional study conducted in 15 purposively selected areas of Dhaka metropolitan city (where rag pickers were live) from December 2013 to June 2014. Rag pickers age between 6-17 years old were the population of this study. A total 300 rag pickers was selected through purposive sampling methods from the selected areas of Dhaka metropolitan city. Data were collected through face to face interview by using pre tested semi-structured questionnaire. Collected data were coded and entered into the software and analyzed into SPSS 20. Descriptive statistics was used for frequency, percentage, SD and presented through tabulation. Nutritional status was determined by Z-score. The purpose and nature of the study were explained to the child rag pickers. Informed consent were taken from them and their parents (if they had) or local guardian.

### Results

#### Demographic Information of the respondents

Among the 300 rag picker child about 91.3% (274) were boys and rest of 8.75% (26) were girls. Age of the respondents were categorized into three groups like 6 to 9 years, 10 to 13 years and 14 to 19 years old. Study found the highest majority (64.7%) respondents were in age group 10 to 13 years the second highest (22%) were in age group 6 to 9 years and rest of 13.3% were in age group 14 to 19 years old. Study revealed that about 55% respondents were live with their parents where rest of 45% were live alone or other persons. More than half (51.3%) rag pickers child sleep in the slum and rest of 37.7% and 11% sleep in rail/bus station and on road respectively. About 61.7% (185) respondents sleep on quilt and rest of 38.3% (11) sleep on paper or polythene. In case of place of collecting scrap, respondents reported that (multiple responses) most (94.3%) scrap collected from road side waste and rest of 89.3%, 84% and 9.6% collected from dumping station, neighborhood bins and others respectively. About 33.1% respondents spend money for buying food, 27.1% give money to their family, 19.8% buy personal thing, 14.7% save and 5.2% spend for other purpose (Table 1).

#### Educational status of the respondents

Study found among 300 rag picker child about 73.3% (220) didn't go school and rest of 26.7% (80) went to school. But before coming in Dhaka respondents reported that about 70.9% (156) went to school and rest of 29.1% (64) never went to school at all. The reason for discontinuing school, the highest respondents reported that they could not afford money and the second highest reported that they leave school to earn money and rest of 16%, 5.5%, 8.6%, 10% and 12.2% leave school for don't like, could not pass exam, not time to study, parents ask to stop and others respectively (Table 2).

Characteristics	Frequency	Percentage
<b>Gender</b>		
Boys	274	91.3
Girls	26	8.7
<b>Age (years)</b>		
6 - 9	66	22
10 - 13	194	64.7
14 - 17	40	13.3
<b>Living with</b>		
With Parents	165	55
Alone/other	135	45
<b>Place where sleep</b>		
On road	33	11
In slum	154	51.3
Rail/Bus station	113	37.7
<b>Materials on which they sleep</b>		
Quilt	185	61.7
Paper/polythene	115	38.3
<b>Place of collecting of scrap (Multiple response)</b>		
Dumping station	268	89.3
Neighborhood bins	252	84
Road side Waste	283	94.3
Other	29	9.6
<b>Use of their earned money</b>		
Give to family	197	27.1
Save a bit	107	14.7
Buy food	241	33.1
Buy personal usable	144	19.8
Other	38	5.2

**Table 1:** Demographic Information of the respondents.

### Morbidity pattern of the respondents

#### Diseases suffered during last three months period

Study showed that about 45% (135) respondents suffered from fever where second highest (14.7%) respondents suffered from abdominal pain last three months. Rest of 11.7% (35), 10% (30), 12.3% (37), 7% (2) and 5.7% (17) suffered from skin diseases, diarrhea, cough, jaundice and others respectively (Table 3).

Characteristics	Frequency	Percentage
<b>Going school at present</b>		
Yes	80	26.7
No	220	73.3
<b>Ever going school</b>		
Going school	156	70.9
Didn't go school	64	29.1
<b>Reasons for discontinuation</b>		
Did not like	35	16
Could not pass exam	12	5.5
Not time to study	19	8.6
Could not afford cost	55	25
Parents asked to leave	22	10
To earn income	50	22.7
Other	27	12.2

**Table 2:** Educational status of the respondents.

Diseases	Frequency	Percent
Skin disease	35	11.7
Fever	135	45.0
Diarrhea	30	10.0
Cough	37	12.3
Jaundice	2	7
Abdominal pain	44	14.7
Other	17	5.7
Total	300	100.0

**Table 3:** Diseases suffered from last three months period.

#### Sexually abused during last three months period

In case of sexual abuse of the respondents study found that about 7% (21) respondents abused sexually during their life, where 71.43% (15) were boys and 28.57 (6) were girls (Table 4).

Facing sexual abusing	Boy		Girl		Total	
	<i>n</i>	%	<i>n</i>	%	<i>N</i>	%
Yes	15	5.5	6	23.1	21	7
No	259	94.5	20	76.9	279	93
Total	274	100	26	100	300	100

**Table 4:** Sexually abused during last three months period.

## Nutritional status

### Height for Age (Z-score) of the respondents

Data represented in above table shows at the age of 6-9 years 6.51% Rag pickers were severely stunted, 13.6% moderately stunted, and 80.3% not stunted. At the 10-13 years 15.5% Rag pickers were severely stunted, 35.6% moderately stunted and 49% not stunted. At the age of 15-17 years 47.5% Rag pickers were severely stunted, 35% moderately stunted and 17.5% not stunted (Table 5).

Indices	Age Group						Total	
	6-9		10-14		15-17		N	%
	n	%	n	%	n	%		
Severely Stunted (<-3.00 SD)	4	6.51	30	15.5	19	47.5	53	17.7
Moderately Stunted (<-2.99 SD to -2.00 SD)	9	13.6	69	35.6	14	35	92	30.7
Not Stunted (>-2.00 SD)	53	80.3	95	49	7	17.5	155	51.7

**Table 5:** Height for Age (Z-score) of the respondents.

### Weight for Age (Z-score)

Data represented in above table shows at the age of 6-9 years 3% Rag pickers were severely underweight, 19.7% moderately underweight and 77.3% not underweight. At the 10-13 years 18.6% rag pickers were severely underweight, 24.2% moderately underweight and 57.2% not underweight. At the age of 15-17 years 35% rag pickers were severely underweight, 47.5% moderately underweight and 17.5% not underweight (Table 6).

Indices	Age Group						Total	
	6-9		10-14		15-17		N	%
	n	%	n	%	n	%		
Severely underweight (<-3.00 SD)	2	3	36	18.6	14	35	52	17.3
Moderately underweight (<-2.99 SD to -2.00 SD)	13	19.7	47	24.2	19	47.5	79	26.3
Not underweight (>-2.00 SD)	51	77.3	111	57.2	7	17.5	169	56.3

**Table 6:** Weight for Age (Z-score) of the respondents.

## Discussion

Study showed that most of the rag picker children were boys and highest majority were in age group 10 to 13 years. Almost half respondents were living alone or others. More than half rag picker child sleep in slum and more than one third sleep in rail or bus station. About one third respondents sleep on paper or polythene. Most of them collect scrap from Dumping station, Neighborhood bins and road side, most of the time they spend their money for buying food and spend for their family. About more than two third respondents did not go to school and about one third never went to school. Study found, the most reason for leaving school was not able to afford money. Study revealed that more than half of the respondents suffered from fever during the period of last three months and the second highest suffered from abdominal pain followed by cough. About 7% respondents abused by sexually where girls are higher than boys. Although study has done in India show different results, however the pattern is almost same to them [10]. In case of Nutritional status study found that about one third of the rag picker was moderately stunted in height for age and weight for age respectively.

### Conclusion

Child rag-pickers suffered from high morbidity and low nutritional status. Necessary steps should be taken to reduce their sufferings otherwise they will become a burden for the country in future.

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