A STUDY OF MORBIDITY PROFILE OF UNDER FIVE CHILDREN IN THE URBAN SLUMS OF SILCHAR, ASSAM

Ajoy Bhusan Nath[1]

[1]*Assistant Professor, Department of Community Medicine, Silchar Medical College and Hospital, Silchar, Assam.*

ABSTRACT

BACKGROUND

Morbidity rates are higher among the under five children specially in developing countries. Children are the backbone of future generation. The under five year is an important age group as the morbidity profile of this age group will have a far-reaching consequence on the overall development of the country.

The Objectives of the study are- (1) to study the morbidity profile of under fives in the urban slums and (2) to assess the various sociodemographic correlates affecting the morbidity.

MATERIALS AND METHODS

The present study was a community based cross-sectional study conducted in urban slums of Silchar, Assam from March 2018 to August 2018 among 260 under five children. The data collected in a predesigned and pretested schedule by interview method among the care givers especially the mothers of the children by house to house visit. During home visits, socio demographic profile of the family was also taken along with interview of mothers and examination of children.

RESULTS

In the present study, it was observed that 62.31% children were suffering from one or more morbid conditions. The leading cause of morbidity found were acute respiratory infection (34.57%), pallor (21.60%), malnutrition (20.37%), diarrhoea (12.35%), worm infestation (11.73%) and skin diseases (10.49%). Significant relation of morbidity in the children with caste, family type, parent's education, type of house, breastfeeding and immunization was seen.

CONCLUSION

It was revealed from this study that the morbidities among under five children in slum areas of Silchar was much higher. A significant association between the various sociodemographic criteria correlating with morbidity suggests a need to develop strategies for improvement of literacy status of mother, socioeconomic condition of people and adequate knowledge of exclusive breastfeeding and immunization.

KEYWORDS

Under Five Children, Morbidity, Slum Areas.

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BACKGROUND

Morbidity has been defined by WHO (World Health Organization) as any departure, subjective or objective, from a state of physiological or psychological well-being. In developing countries, the health status of children is very disappointing because of high morbidity which results in physical, emotional and economic drain on the community. Children are the most precious human resource and this future generation deserves the best possible up bringing.[1]

In a country like India, the pre-school age children represent about 12% of the general population.[2] The health and welfare of this group has been given greatest priority over the years both as National and State level. Children are the backbone of the country and their health is a prime concern. The first few years of life are the most crucial period as this age is known for accelerated growth and development, warranting regular monitoring and any adverse influences during this period may result in severe limitations in their development as 40% of physical growth and 80% of mental growth occurs during this period.[3]

Children in under five years of age are the most vulnerable section of the society and are affected most by the various common and easily treatable illnesses. Infectious diseases like whooping cough have been found to be the world's leading cause of morbidity and pre-mature death especially in children in developing countries. 6.9% of deaths in children were attributed to respiratory infections, 2.2% to malarial fever and 2% to childhood diseases.[4]

In India, common morbidities among children of this age group are fever, acute respiratory infections, diarrhoea and malnutrition. Unfortunately, malnutrition is rarely perceived as a morbid event by families, communities and health system.[5] Nutritional status of children is an indicator of nutritional profile of the entire community. Studies

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Corresponding Author:
Dr. Ajoy Bhusan Nath,
Assistant Professor,
Department of Community Medicine,
Silchar Medical College and Hospital,
Silchar-14, Assam.
E-mail: abnath01@gmail.com
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conducts worldwide show that 150 million (26.6%) are under weight, while 182 million (32.5%) are stunted all over the world. More than half of the world's malnourished people live in India. 54% children are underweight, 52% are stunted, while 17% are wasted.[6]

The morbid conditions are more prevalent in the urban slum children who are exposed to various risk factors like overcrowding, poor nutrition, lack of safe drinking water and environmental sanitation. Slums were initially thought to be temporary phenomena, but this decade has been seen that slums are here to stay as long as the 'pull' force of urban prosperity and the 'push' force of rural poverty stays.[7]

In the North eastern states like Assam particularly in Silchar very few studies had been conducted in urban slum areas and hence the present study will give sufficient information regarding the extent of health problems among under five children.

Thus, keeping in mind all those facts, the present study had been undertaken in the urban slums of Silchar, Assam with the following objectives:

(i) To study the morbidity profile of under five children in the urban slums and

(ii) To assess the various socio demographic correlates affecting the morbidity.

MATERIALS AND METHODS

A community based cross sectional study was conducted among the under five children in urban slums of Silchar in Cachar district of Assam. Approval from the Ethical Committee, Silchar Medical College & Hospital, Silchar was taken prior to conduct the study. Sample size was calculated by using the formula 4 pq/L.[2] Ujwala U. Ukey et al.,[6] observed in their study the prevalence of morbidity among 0-5 years children as 41.4% in urban slum of Visakhapatnam. Considering P=41.4%, q=100-p and allowable error (L) = 15% of P, required sample size was calculated as 252.

For this purpose of study, 50% of the total slums i.e. 10 slums out of total 19 identified urban slums of Silchar town were selected by random sampling method. Then for uniform distribution of total number of study subjects in each slum it was decided to take 26 children per slum, thus the total number of study subjects came to 260.

The data were collected from March 2018 to august 2018 in a predesigned and pretested questionnaire by interview method among the caregivers including physical examination of children, review of records and by house to house visit in selected slums.

During home visits, socio demographic profile of the family was taken along with the interview and examination of under five children. The parent of the children particularly the mother was interviewed regarding the child illness at present or the last two weeks. Immunization status of the child, breastfeeding practice, health seeking behaviour during illness along with dietary pattern were also recorded on the predesigned and pretested questionnaire. Each under five children of the family were examined physically from head to toe for presence of any health problem and anthropometric measurements were taken to assess the nutritional status. Weight, height and mid upper arm circumference was measured. Standard procedures were followed for anthropometric measurements. Modified B.G. Prasad's scale was used to classify socioeconomic status.

The data thus collected on various aspects of the study were compiled, tabulated and statistical analysis were done manually subjecting the data for the statistical tests. Data were analysed using percentages and Pearson's Chi-square test (χ^2) for normal distribution. P value less than 0.05 were considered significant.

Age Group (in Years)	No. of Children	Percentage
0-1	29	11.15
1-2	51	19.62
2-3	45	17.31
3-4	56	21.54
4-5	79	30.38
Total	**260**	**100**

Table 1. Distribution of Children According to Age

Gender	No. of Children	Percentage
Male	141	54.23
Female	119	45.77
Total	**260**	**100**

Table 2. Distribution of Children According to Sex

Morbidity	No. of Children	Percentage
Present	162	62.31
Absent	98	37.69
Total	**260**	**100**

Table 3. Distribution of Children According to Morbidity

Morbidities	No. of Children (n=162)	Percentage
Acute Respiratory Infection	56	34.57
Diarrhoea	20	12.35
Skin Diseases	17	10.49
Worm Infestation	19	11.73
Ear Discharge	06	3.70
Eye Infection	04	2.47
Dental Caries	13	8.02
Pallor	35	21.60
Fever	07	4.32
Malnutrition	33	20.37

Table 4. Pattern of Morbidity Among Children

N.B.: Respondents have given multiple responses.

Gender	No. of Children	Morbidity Present	Percentage
Male	141	92	65.25
Female	119	70	58.82
Total	**260**	**162**	**62.31**

Table 5. Distribution of Children According to Gender and Morbidity

$\chi^2 = 1.13$ df = 1 $p>0.05$

Caste	No. of Children	Morbidity Present	Percentage
General	126	73	57.94
S.C.	94	76	80.85
O.B.C.	40	13	32.50
Total	**260**	**162**	**62.31**
Table 6. Distribution of Children According to Caste and Morbidity			
$\chi^2 = 29.91$ df = 2 p<0.001			

Socioeconomic Status	No. of Children	Morbidity Present	Percentage
Class II	32	22	68.75
Class III	70	46	65.71
Class IV	142	85	59.86
Class V	16	09	56.25
Total	**260**	**162**	**62.31**
Table 7. Distribution of Children According to Socioeconomic Status and Morbidity			
N.B.: No children found in class I socio economic status.			
$\chi^2 = 1.52$ df = 3 p>0.05			

Literacy Status	No. of Children	Morbidity Present	Percentage
Both Parents Literate	140	67	47.86
Only Father Literate	40	33	82.50
Only Mother Literate	80	62	77.50
Total	**260**	**162**	**62.31**
Table 8. Distribution of Children According to Literacy Status of Parent and Morbidity			
$\chi^2 = 27.26$ df = 2 p<0.001			

Type of Family	No. of Children	Morbidity Present	Percentage
Nuclear	178	102	57.30
Joint	82	60	73.17
Total	**260**	**162**	**62.31**
Table 9. Distribution of Children According to Type of Family and Morbidity			
$\chi^2 = 6.02$ df = 1 p<0.05			

Type of House	No. of Children	Morbidity Present	Percentage
Kuccha	122	98	80.33
Semi Pucca	87	49	56.32
Pucca	51	15	29.41
Total	**260**	**162**	**62.31**
Table 10. Distribution of Children According to Type of House and Morbidity			
$\chi^2 = 41.71$ df = 2 p<0.001			

Breast Feeding	No. of Children	Morbidity Present	Percentage
Exclusive Breastfeeding: ≥ 6 Months	98	45	45.92
< 6 Months	162	117	72.22
Total	**260**	**162**	**62.31**
Table 11. Distribution of Children According to Breast Feeding and Morbidity			
$\chi^2 = 17.98$ df = 1 p<0.001			

Immunization Status	No. of Children	Morbidity Present	Percentage
Completely Immunized	176	101	57.39
Partially Immunized	84	61	72.62
Total	**260**	**162**	**62.31**
Table 12. Distribution of Children According to Immunization Status and Morbidity			
$\chi^2 = 5.61$ df = 1 p<0.05			

RESULTS

In the present study, a total of 260 children under the age of 5 years were examined and their mothers were interviewed. Majority of the children belonged to 4-5 years age group (30.38%) followed by 3-4 years (21.54%) and the least number of children belonged to 0-1 year (11.15%). (Table 1)

Out of the total children 141 (54.23%) were male in comparison to 119 (45.77%) female. (Table 2)

It was observed that 162 (62.31%) children were suffering with one or more morbid conditions. (Table 3)

It was found that the leading causes of morbidity were acute respiratory infection (34.57%), pallor (21.60%), malnutrition (20.37%), diarrhoea (12.35%), worm infestation (11.73%) and skin diseases (10.49%). (Table 4)

It was also seen that the morbidity among male children were more (65.25%) than that of female under five children (58.82%). (Table 5)

Regarding caste, morbidity was seen higher in scheduled caste (80.85%) followed by general caste (57.94%) and other backward caste (32.50%) (Table 6).

It was also found that the prevalence of morbidity was higher in children of upper socioeconomic status (68.75%). (Table 7)

So far as literacy of parent is concerned, the morbidity among children of literate father was found more (82.50%) than literate mother (77.50%) and when both parents literate, the morbidity found was less (47.86%). (Table 8)

It was also observed that morbidity among children was more in joint families (73.17%) (Table 9) and residing in kuccha house (80.33%). (Table 10) Again morbidity was seen higher among those children who were deprived of absolute breastfeeding (72.22%) (Table 11) and also who were partially immunized (72.62%). (Table 12)

DISCUSSION

In the present study it was observed that the morbidity among under five children in the urban slums of Silchar, Assam was 62.31%.

R.V. Raja et al,[3] in their study at rural area of Tamil Nadu found the overall 71.7% under-fives were suffering with one or more morbid condition.

Debasis Paramanik et al,[8] also observed the prevalence of morbidity among children in a rural area of West Bengal was 76.2%.

Ujwala U. Ukey et al,[6] found the morbidity among preschool children (0-5 years) in a urban slum area of Visakhapatnam was 41.4%.

In their studies Bhansali et al,[9] and Chopdar et al,[10] mentioned that the morbidity among the children were 95.7% and 57.6% respectively which is much higher than the present study.

It was observed in the present study that the majority of under five children were suffering from acute respiratory infection (34.57%), pallor (21.60%), malnutrition (20.37%), diarrhoea (12.35%), worm infestation (11.73%) and skin diseases (10.49%).

Srivastava DK et al,[11] found the leading morbid conditions among under five children were diarrhoea (63.87%), respiratory tract infection (46.72%), malaria (20.8%), acute abdominal pain (18.98%) and ear infection (11.31%).

Goswami et al,[12] Gupta RK et al,[13] Biswas R[14] also observed the similar morbid conditions among under five children in their studies.

RV. Raja et al,[3] observed the leading cause of morbidity among the under five were respiratory infection (47.5%) followed by skin problem (7.10%) and diarrhoeal disease (5.10%).

Debasis Paramanik et al,[8] also observed acute respiratory infection (38.6%), pallor (27.7%), worm infestation (14.9%), diarrhoea (12.8%), skin diseases (12.8%) and dental caries (9.9%) among the children in their studies.

Another study conducted in urban slum area of Nagpur by Narkhede Vinod et al,[15] among the under five children found that morbid conditions were anaemia (77.78%), under nutrition (52.23%), respiratory diseases (21.29%), caries teeth (15.84%), loose motion (11.39%) and scabies (7.92%).

Similar findings were seen in the studies of Chandrasekhar U and George B.[16] and Sachithananthan V and Chandrasekhar U.[17]

The present study thus corroborates with the above studies of different workers.

In the present study it was observed that the morbidities were more in case of male children (65.25%) than their female counterparts (58.82). But these differences were found statistically in significant (P>0.05).

Ujwala U. Ukey and Dhruv S. Chitre[6] also observed in their study that the morbid conditions were more in male (59.6%) than female children (40.1%). Similar findings of male predominance over female had been quoted by Bhansali KM[9] Lakhmi JA,[4] Parmita S,[18] and Mittal A.[19] Again a study conducted by R.V. Raja et al,[3] in a rural area of Tamil Nadu observed that morbidities were higher in female (78%) than male children (67%). This may probably due to inadequate care of female children and gender inequality. These findings were consistent with another study conducted by Amla C. and Chowdhary KC.[20]

It was also observed in the present study that the under five children belonged to scheduled caste had more morbid conditions (80.85%) than general caste (57.94%) and other backward classes (32.50%). These differences were found statistically significant (P<0.001). D. Paramanik et al,[8] reported morbidity among scheduled tribe children was higher (90.9%) than other backward class (76.3%) and scheduled caste (64.3%).

The present study revealed that the majority of under five children with morbidities belonged to higher socio-economic status (68.75%). But these differences were found statistically insignificant (P>0.05). R.V. Raja et al,[3] found in their study that the children belonged to upper socio-economic class were more affected by diseases (84.20%) than others. D. Paramanik et al,[8] also mentioned that the morbidity was more (77.8%) among the children from upper socio-economic class. The present study thus found to be similar with the above studies of different workers.

In the present study it was noticed that morbidity among under five children were less (47.86%) when both parents were literate. These differences were found statistically significant (P<0.001).

It was also found that morbidity among the children belonged to joint family was more (73.17%) than the nuclear family (57.30%). These differences were also found statistically significant (P<0.05). D. Paramanik[8] in his study in a rural area of West Bengal also observed that the prevalence of morbidity was higher (88.4%) in nuclear family.

Again, morbidity among children were found higher in kuccha house (80.33%) than semi-pucca (56.32%) and pucca (29.41%). These differences were found statistically significant (P<0.001). Many workers[6,8] also observed this relation between morbidity and type of house.

It was observed in the present study that the prevalence of morbidity was lower (45.92%) among exclusive breastfeed children. These difference regarding breastfeeding and morbidity was found statistically significant (P<0.001).

R. V. Raja et al,[3] observed 72.5% breastfeed children had morbidity D. Paramanik et al,[8] noticed that the prevalence of morbidity among exclusive breastfeed children were less (67.9%). Bele SD et al,[21] reported significant association between lack of exclusive breastfeeding and occurrence of diarrhoea and ARI where no association was observed with other infections.

In the present study it was also seen that the morbidity was higher in partially immunized children (72.62%) than completely immunized children (57.39%). These differences were also found statistically significant (P<0.05). Many workers[11,3] also observed the influence of immunization over health status of under five children.

CONCLUSION

The present study highlighted that the prevalence of morbidity among under five children in urban slum areas was much higher. Acute respiratory infection is the most common morbidity observed among children followed by pallor, malnutrition and diarrhoea. A significant association between morbidity in children with caste, family type, parent's education, housing condition, breastfeeding and immunization in the present study suggests a need to develop strategies for improvement of literacy status of mother, socio economic condition of people and adequate knowledge of exclusive breastfeeding and immunization which can go a long way in reducing the morbidities.

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