

Original Article

Morbidity Profile of under five children in urban slums of Etawah District.

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Abstract

Background:

Children are the backbone of any country and their health is a prime concern of the country. The _ under five years is an important age group as the morbidity profile of this age group will have a far reaching consequences on the overall development of the country.

Objectives:

- To find out the morbidity profile of under five children in the urban slums
- To find out the co-relates of the study.

Material and Methods:

The present study was a Cross Sectional Study carried out for a period of six months from January 2011 to June 2011. The examination was carried out using a pre designed proforma. Information regarding the immunization and history of any acute illness in last six months was gathered by interview followed by Physical Examination which included anthropometric measurement, that is, weight, height/length, mid arm circumference, head circumference and chest circumference.

Result:

In the present study, only 33.94 % children were completely immunized. Diarrhea and Upper Respiratory Tract Infections were the most common morbidities reported in the age group of 1-5 years. There were no statistically significant differences in the anthropometric profile of the male and female child. 31.7% of male and 23.2% of female child were underweight as compared to the normal standard weight as per their age. 17.9 % of male and 20.1% female were stunted.

Conclusion:

The present study hereby concludes that the Diarrheal Diseases and Upper Respiratory tract Infection are the majorities common among the children of under five years in slum dwellers.

Key Words:

Under Five children, Morbidity Profile, Slum Areas.

Introduction:

Children are the backbone of any country and their health is a prime concern of the country. The under five years is an important age group as the morbidity profile of this age group will have a far reaching consequences on the overall development of the country. WHO has also recognized this as an important indicator of the child health and overall development of countries¹.

Government of India has also made sincere efforts to improve the overall health of under five children using a multiprong approach under National Rural Health Mission

(NRHM). The mission document of NRHM also highlights this as an important issue².

The major diseases affecting this age group are mostly Acute Diarrheal Diseases, Acute Respiratory Infections, Anemia, Skin Diseases, Ear Discharge etc³. These diseases are most common among children belonging to urban slums. The attributes that can be associated with these diseases are mostly overcrowding, poor sanitation, lack of basic amenities, lack of awareness about proper child care among parents of these children etc. Governments, both at central and state level, collect information, directly

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or indirectly, about these diseases through various sources like NFHS, DLHS, periodic surveys etc. However, independent studies are also necessary to validate the findings of above sources. With this background the present study was under taken with the following objectives;

- To find out the morbidity profile of under five children in the urban slums
- To find out the correlates of the study.

Material and Methods:

The present study was a Cross Sectional Study carried out for a period of 6 months from January 2011 to June 2011 by Staff and Student of Department of Community Medicine, UP Rural Institute of Medical Sciences and Research, Saifai. In this study, children under the age of 5 year were selected by house to house visit during the two health check up camps organized by the Department in the slum areas attached to the Urban Health Training Centre in Etawah City. Health check ups were carried out on these children after taking due consent from their parents or guardians.

The examination was carried out using a pre-designed proforma by undergraduate students under the supervision of faculty members and Medical Social Workers of the department. A one day training programme was organized for the all the team members for the standardization of study protocol. Information regarding the immunization and history of any acute illness in last six months was gathered from their parent preferably mother or any close relative of the child. The working definition of 'An acute illness' was taken as any disease or episode that require treatment from any health care professional. Physical Examination included the anthropometric measurement, that is, weight, height/length, mid arm circumference, head circumference and chest circumference.

The information was collected on the general profile of family, socio economic status and the literacy status of parents. For the anthropometric measurement a standardized protocol was developed for the study purpose. The weight was measured using a bathroom scale weighing machine placed horizontally on flat surface and children were asked to stand on it without any footwear and minimum clothing. For children up to the age of one year spring balance was used for measuring the weight. Both the instruments were checked after 50th reading for any possible zero error and necessary correction were made, if required.

The height was recorded by asking the children to stand barefoot by facing the back adjacent to the wall and keeping a scale straight on their head. A point was marked

by pencil on the wall and the children were asked to move away and the height was measured using a measuring tape. Children less than one year were asked to lie down on a flat surface in a supine position with their back and thigh touching the surface and toe facing upward. A mark was made at the head end and at toe end and children were removed. The length was measured using a measuring tape.

The mid-arm circumference was measured at the mid point between the Acromian process of the scapula and the Olecranon process of the Ulna in the left hand in the children between the age group of 1-5 years. The Head Circumference were measured by asking the children to sit on its own or with the help of someone and a measuring tape was wrapped snugly around the widest possible circumference from the most prominent part on the forehead to the widest part of the back of the head. For the chest circumference measurement again, children were asked to sit on it own or with the help of someone. A measuring tape was placed in front of the chest in the mid sternal area and it was wrapped around the chest just above the nipple line with the child quiet and breathing slowly.

All the data were entered in to MS office Excel software and descriptive statistics were applied in the analysis of the study.

Result:

In the present study, a total of 274 children under the age of 5 year were enrolled. Majority of the children were under the age group of 2-3 years followed by 3-4 years. In majority of the children, both the parents were literate. (Table-1)

On questioning about the immunization status with parents or guardian, it was noted that majority of the children were partially immunized. There was a statistically significant difference between the immunization status of male and female children. (Table II)

The most common illness reported by the parents or guardians of the children was diarrhea followed by upper respiratory tract infection. Some children reported multiple episodes of different diseases requiring treatment from health care providers. (Table III)

On anthropometrical examination, it was noted that there is no statistically significant difference between the anthropometric profile of male and female child. 31.7% of male and 23.2% of female child were underweight as compared to the normal standard weight as per their age. 17.9 % of male and 20.1% female were stunted. (Table IV)

Table I: Showing the Socio Economic Distribution of the Participants

S. No	Character	Male		Female		Total	
		No.	%	No.	%	No.	%
1	Age(in years)						
	• 0-1	13	8.96	9	6.91	22	8.02
	• 1-2	19	13.10	17	13.17	36	13.13
	• 2-3	41	28.27	38	29.45	79	28.83
	• 3-4	35	24.13	36	27.90	71	25.91
	• 4-5	37	25.51	29	22.48	66	24.08
	Total	145		129		274	
2	Socio Economic classification (Kupuswamy Classification,2011)						
	• Lower	64	44.13	68	52.17	132	48.17
	• Upper lower	51	35.17	39	30.23	90	32.84
	• Middle	30	20.68	22	17.05	52	18.97
	Total	145		129		274	
3	Literacy status						
	• Both parent literate	97	66.89	91	70.54	188	68.6
	• Father literate	36	24.82	24	18.60	60	21.89
	• Mother literate	12	8.27	14	10.85	26	9.48
	Total	145		129		274	

Table II: Showing the distribution of the participants according to the immunization status

Immunization status	Male		Female		Total	
	No.	%	No.	%	No.	%
• Completely immunized	59	40.68	34	26.35	93	33.94
• Partially immunized	71	48.96	69	53.48	140	50.09
• Un-Immunized	15	10.32	26	20.15	41	14.96
Total	145		129		274	
P value	$\chi^2=8.80$; df=2 ; p value= 0.012					

Table III: Showing the distribution according to the Acute Illness in last Six Month

S. No	Diseases	Male (N=145)	Female (N=129)	Total
1	Diarrhea	94	81	175
2	Upper Respiratory Tract Infection	78	72	150
3	Lower Respiratory Tract Infection	54	61	115
4	Malaria	33	24	57
5	Acute Abdominal Pain	24	28	52
6	Ear Infection	19	12	31
7	Other	21	24	45

* Multiple responses was given by some parents/ guardians

Table IV: Showing the distribution according to the anthropometric measurements

Age Group (In year)	Weight						Height				Mid Arm Circumference				Chest Circumference				Head Circumference			
	Male			Female			Male		Female		Male		Female		Male		Female		Male		Female	
	U	N	O	U	N	O	S	N	S	N	M	N	M	N	L	N	L	N	L	N	L	N
• 0-1	5	7	1	3	6	0	3	10	2	7	-	-	-	-	0	13	1	8	2	11	0	9
• 1-2	6	11	2	6	10	1	5	12	2	15	7	12	4	13	3	16	4	13	2	18	3	14
• 2-3	12	24	5	8	26	4	5	36	6	32	8	33	6	32	9	31	6	32	9	30	7	31
• 3-4	11	21	3	9	22	5	7	28	8	28	9	26	9	27	6	35	5	31	5	31	5	31
• 4-5	12	19	6	4	20	5	6	33	8	21	11	26	3	26	7	25	3	26	8	29	2	27
Total	46	82	17	30	84	15	26	119	26	103	35	97	22	98	25	120	19	110	26	119	17	112
P value, df, χ^2	1.72,8, 0.988			5.53,8 0.699			2.95,4 0.566		2.31,4, 0.679		2.28,3, 0.516		2.78,3, 0.427		4.19,4, 0.381		1.64,4, 0.801		2.36,4, 0.670		3.59,4, 0.464	

U=Under Nutrition
S= Stunted

N= Normal
M= Malnutrition

O= Overweight
L= Lower than Normal

Discussion:

It was noted in the present study that only 33.9% of the total children registered for the study were completely immunized as per the Universal Immunization Programme whereas majority of them were partially immunized (51.1%). The immunization status of male child was comparatively better than the female child and this difference was statistically significant. There can be various reasons for the low immunization coverage in the area like lack of awareness about the importance of immunization in the parents, lack of proper immunization facilities in the close vicinity of the household, lack of transportation facilities etc. The percentage of completely immunized child reported in the present study is some what similar to the rates reported in District Level Health Survey- 3 (DLHS-3) for Uttar Pradesh (30.3%) and Etawah (31.9%) in 2007-08⁴. The reasons for the differential immunization status for male and female child can be attributed to the fact that there is a male child preference in Northern Indian Society and more care is given to male child compared to female child.

It was noted in the pretest study that majority of the parents/guardians told that their children suffered from one or multiple episodes of Diarrhea followed by Upper Respiratory Tract Infection for which they had to take treatment from any Health Care Providers. This is similar to the findings of Goswami M et al³ and others⁵⁻⁷ and Even the DLHS-3 data also support the above findings⁴. The higher prevalence of Diarrhea and other communicable diseases could be due to

poor environmental condition, improper cooking practices, overcrowding etc. However the authors are of the opinion that a separate study should be carried out to assess the reasons for higher prevalence among children of slum dwellers.

On analysis of anthropometric data in present study, it was noted that there was no statistically significant difference between the anthropometric profiles of male or female child. It was noted that 31.7% of male and 23.2% of female child were underweight as compared to the normal standard weight as per their age. This is somewhat lower than the rates reported by UNICEF India⁸ and World Bank⁹. Similarly, 17.9 % of male and 20.1% female were stunted. The variation in the rates could be attributed to the fact that in the present study the data was collected from just two slum areas and wider population coverage is required to make a more precise representation.

On evaluation of mid arm, chest and head circumferences data, it was noted that 26.5% male and 18.3 % female child were suffering from some form of malnutrition using 13.5 cm as a cutoff criteria for mid arm circumference. This is again lower than the rates reported by UNICEF India⁸. Similarly, the rates for head and chest circumference were also lower than the rates reported by UNICEF.

Conclusion:

The present study hereby concludes that the Diarrheal Diseases and Upper Respiratory tract Infection are the majorities common among the children of under five year in

slum dwellers. They are also responsible for the high prevalence of malnutrition in the region as found in the present study and as reported in DLHS survey. The present study also concludes that the percentage of complete immunization was also low which affects the high incidence of above morbidities in the region.

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