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Original Research Article

A Comparative Study of Health Profile of Children (0-6years) in ICDS vs. Non ICDS Urban Slums of Hyderabad; A.P.

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ABSTRACT

Background: The development of the nation lies in the hands of the children who are the future citizens. Childhood malnutrition among urban poor is similar to or higher than rural poor. Here a comparative study of health profile of children 0-6yrs of age residing in the urban slums covered by ICDS and not covered by ICDS in Hyderabad A.P. was undertaken.
Objectives: To compare the Immunization coverage, Nutritional status and morbidity profile of children who are beneficiaries of ICDS with children who were not ICDS beneficiaries in the urban slums of Hyderabad. Material and Methods: A community based cross sectional comparative study.
Results: Although the nutritional status (38.83% normal), Immunization status (Fully immunized59.19%) and health status among the ICDS beneficiaries was better when compared to Non ICDS, however the overall health of all the children in both ICDS slums and non ICDS slums was poor.

Key Words: ICDS, Urban slums, Nutritional status, Morbidity profile, Beneficiaries.

INTRODUCTION

Mothers and children under 6 years age constitute a high priority group because children are connected with their development and survival. The development of the nation lies in the hands of the children who are the future citizens. So the Government of India has launched the ICDS project in 1975, with an aim of providing immunization, health care, supplementary nutrition, growth monitoring, pre-school education and health education to improve the health of preschool children. Urban Poor is a rapidly increasing segment of India's population. they constitute more than 40% of the population. The risk in case of infants and

With more than 90 million people living in urban poor settlements, the rate of urban poverty in India is staggering. An analysis of population growth trends

between 1991 and 2001, show that while India grew at an average annual growth rate of 2%, urban India grew at 3%, mega cities at 4% and slum populations rose by 5 to 6%.These numbers are expected to rise and if the predictions are correct, then in the next 25 years the number of urban poor could end up in excess of 200 million. Childhood malnutrition among urban poor is similar to or higher than rural poor. Prevalence of malnutrition among the urban poor is a cause of major concern. [1, 2]

As Hyderabad city is rapidly developing, the urban slum population is alarmingly increasing posing greatest threat to the health status of the slum population. We have conducted this study to provide the base line data and give recommendations to improve the health status of the urban slum population especially children below 6yrs age. Current Urban ICDS Coverage is inadequate for this rapidly growing and vulnerable population. Many Urban poor remain left out from nutrition and health benefits of ICDS. The Below Poverty Line lists and slum lists used to identify beneficiaries may exclude the 'hidden' construction site workers, pavement dwellers and yet to be notified slums. Such exclusion leaves these vulnerable sections out of the ambit of many government programs like ICDS. [1, 2]

Objectives of the study:

- To compare the morbidity profile of 0-6years children in ICDS vs. Non ICDS Urban slums.
- To compare the level of immunization coverage and nutritional status in the same study population.
- To suggest remedial measures to improve health status of these children.

MATERIAL & METHODS

It is a community based cross-sectional comparative study. The slums covered by ICDS in Hyderabad are 664.The total ICDS project of Hyderabad is divided into5projects.Project number 1 is taken for study. The project 1 is divided into 6 sectors with 148 slums. Among these 148 slums 12 slums were selected randomly, 2 from each sector. About 100 children each aged 0-6 years were randomly selected from each of these 12 slums. So a total of 1200 children from ICDS slums were selected. Similarly among the Non- ICDS slums, 12 slums were selected randomly and 100 children aged 0-6 years were randomly selected from each of the 12 slums. Hence a total of 1200 children from Non- ICDS slums were selected.

The data was collected with the help of pre designed and pretested questionnaire containing the demographic profile, socioeconomic data, Immunization status, Nutritional status, health status of the children. Physical examination, anthropometric measurement, Hemoglobin percent estimation was done. Nutritional grading was done according to WHO growth charts.

Statistical Analysis: Data was entered into an excel spreadsheet and double checked for errors. It was analyzed using Epi-info version 3.5.3. Pearson's chi-square test was applied to test the relationship of categorized independent and dependent variables. A P value (significance) of <0.05 is deemed statistically significant. Ethical clearance was obtained from the ethical committee of Osmania Medical College, Hyderabad.

RESULTS

Socio- Demographic Profile:

The study population included 0-6 yrs age group children. Male children in ICDS covered slums were more 616(51.3%) when compared to female children 584(48.67%).Even in Non ICDS slums,

male children were more 620(52%) when compared to female children 580(48%) showing the decrease in sex ratio of 0-6 yr children in both ICDS and Non ICDS slums.

TABLE-1: Distribution of children in ICDS and Non ICDS slums by Age and Sex

Age in months	ICDS						Non ICDS					
	Male		Female		Total		Male		Female		Total	
	No	%	No	%	No	%	No	%	No	%	No	%
0-12	68	11	76	13	144	12	74	12	81	14	156	13
13-24	111	18	70	12	181	15	87	14	99	17	185	15
25-36	92	15	58	10	151	13	99	16	104	18	204	17
37-48	99	16	117	20	215	18	105	17	93	16	198	17
49-60	111	18	123	21	234	19	124	20	87	15	211	18
61-72	136	22	140	24	276	23	130	21	116	20	246	21
Total	616	100	584	100	1200	100	620	100	580	100	1200	100

There was a significant association between maternal literacy status and malnutrition and also health care seeking behavior of mothers. [3, 4] The literate mothers in both ICDS and and Non ICDS slums were only 55% and 53% respectively showing nearly half of the mothers were illiterate. Hindus constituted 71% and 62%, Muslims 27% and 36% and Christians 2% and 3% in ICDS and Non ICDs slums respectively.

TABLE- 2: Literacy Status of mothers in ICDS and Non ICDS slums

Literacy Status	ICDS		NON ICDS	
	No	%	No	%
Literate	665	55.42	637	53.08
Illiterate	535	44.58	563	46.92
Total	1200	100	1200	100

TABLE 3: Distribution of Families by religion in ICDS and Non ICDS

Religion	ICDS		Non ICDS	
	No	%	No	%
Hindu	850	70.8	738	61.5
Muslim	325	27.08	428	35.67
Christian	25	2.08	34	2.83
Others	0	0	0	0
Total	1200	100	1200	100

Immunization status:

Fully immunized children were almost double in ICDS slums (59.19%) when compared to Non ICDS slums (32.18%).The percentage of children partially and not immunized were substantially higher 45% and 23% in Non ICDS slums when compared to 38% and 3% in ICDS slums. This difference was statistically significant (P <0.05).

TABLE 4: Immunization status(>1 year) in ICDS and Non ICDS Slums

Immunization Status	ICDS		Non ICDS	
	No	%	No	%
Fully immunized	625	59.19	336	32.18
Partially Immunized	402	38.07	465	44.54
Notimmunized	29	2.74	243	23.28
Total	1056	100	1044	100

Nutritional status:

Children who are normal were more in ICDS area 38.83% (Male 45%, Female 32.53%) when compared to Non ICDS area 32.58% (Male 36.45%, Female28.45%). Mal nourished children were more in Non ICDS area 67.42% when compared to 61.17% in ICDS area. This difference is statistically significant. (P< 0.05) Female children were showing higher percentage of malnutrition in both ICDS (67.46%) and Non ICDS slums (71.55%) showing there is a gross disparity in obtaining the services regarding girl child. This difference was statistically significant in both ICDS and Non ICDS slums (P <0.05). There were no

Grade 4 malnourished children in both ICDS and Non ICDS slums.

TABLE-5: Nutritional grade of children by growth chart(WHO) in ICDS and Non ICDS slums

Nutritional Grade	ICDS						Non ICDS					
	Male		Female		Total		Male		Female		Total	
	No	%	No	%	No	%	No	%	No	%	No	%
Normal	276	44.81	190	32.53	466	38.83	226	36.45	165	28.45	391	32.58
Grade 1	215	34.9	229	39.21	444	37	245	39.52	274	47.24	519	43.25
Grade 2	117	18.99	153	26.20	270	22.50	130	20.96	124	21.38	254	21.17
Grade 3	8	1.29	12	2.05	20	1.67	19	3.06	17	2.93	36	3
Grade 4	0	0	0	0	0	0	0	0	0	0	0	0
Total	616	100	584	100	1200	100	620	100	580	100	1200	100

Morbidity Status:

Anemia Hemoglobin percent less than 11gms is 29% and 38% and less than 7gms was 4% and 5% in ICDS and Non ICDS slums respectively. This difference was statistically significant ($P < .05$). Vitamin A deficiency was 8% and 15 %, Vitamin B deficiency was 15% and 20%, Respiratory infections were 10% and 19%, Diarrheal diseases were 4% and 10%, scabies was 1% and 2% and skin infections were 3% and 7% in slums covered by ICDS and not covered by ICDS respectively. The morbidity also was seen more in Non ICDS slum children when compared to slums covered by ICDS.

TABLE 6: Distribution of Morbidity status in ICDS and Non ICDS slums

Diseases	ICDS		Non ICDS	
Nutritional deficiency	No	%	No	%
Anemia(<11g)	348	28.98	458	38.16
Anemia(<7 g)	53	4.44	61	5.06
Vitamin A deficiency	102	8.48	179	14.94
Vitamin B deficiency	174	14.53	174	19.77
Respiratory infections	125	10.45	229	19.08
Diarrhea	43	3.62	119	9.88
Scabies	16	1.36	19	1.61
Skin infections	32	2.65	88	7.35

DISCUSSION

In both ICDS and Non-ICDS areas, the percent of male children were more when compared to female children showing there is a decrease in sex ratio of 0-6 yr children. This was also seen in UNFPA study on Child sex ratio (0-6 years, 2001) where it was shown that there were 961 females for every 1000 male children in A.P. [5]

Fully immunized children in our study were almost double in ICDS slums (59%) when compared to Non ICDS slums (32%). In a study by Siddharth Agarwal et al, [6] among children aged 12-23 months in urban India, 60% are fully immunized (immunization cards and mother's recall) which presents an average of the better and poorly performing states.

Regarding nutritional status of children in our study, normal children were more in ICDS area 38.83% (Male 45%, Female 32.53%) when compared to Non ICDS area 32.58% (Male 36.45%, Female28.45%). Malnourished children were more in Non ICDS area 67.42% when compared to 61.17% to ICDS area. Female children were showing higher percentage of malnutrition in both ICDS (67.46%) and Non ICDS slums (71.55%).

It was also observed in a study by Jain, Shailaja and Agarwal P.L, [7] in ICDS group 35.92% children were in normal nutritional grade. The prevalence of Grade I, II, III and IV malnutrition in ICDS group was found to be 42.19%, 17.35%, 4.55% and 0% respectively. In non-ICDS group 26.40% children were normal, 41.20% children were inGrade I malnutrition, 26.20% were in Grade II, 5.40% were in Grade III, and 0.80% were in Grade IV malnutrition.

In another study by George K.A. et al, [8] normal nutritional status was seen among 46.7% of the children.

It was also noticed in a study by Vandana Pandey, et al [9] that the mean Weight of ICDS beneficiaries in general was more than that of non ICDS utilizers.

In a study by Dinesh Kumar et al. (2006), [10] out of all the children studied 36.4% were underweight, 51.6% stunted and 10.6% wasted and also the prevalence of stunting was more among females (63.3%) than males (44.9%).

Prevalence of anemia in our study was more among the children residing in Non-ICDS slums compared to those residing in ICDS slums. This was similar to a study done by Sandhya Rani et al [11] where it was found that anemia was more prevalent among children in the non ICDS areas (52.2%).

CONCLUSION

Fully immunized children were almost double in ICDS slums when compared to Non ICDS slums. The percentage of children partially and not immunized was substantially higher in Non ICDS slums when compared to ICDS slums.

Children who are in normal nutritional status were more in ICDS area when compared to Non ICDS area. Mal nourished children were more in Non ICDS area when compared to ICDS area. Female children were showing higher percentage of mal nutrition in both ICDS and Non ICDS slums showing there was a gross disparity in obtaining the services regarding girl child.

The morbidity also was seen more in Non ICDS slum children, regarding nutritional deficiencies like anemia, vitamin A deficiency, Vitamin B deficiency, Respiratory infections, Diarrhea, scabies and skin infections.

Although there is some improvement in the nutritional status, immunization and health status in ICDS beneficiaries when compared to slums not covered by ICDS there is a long way to achieve the goals. The health of the ICDS beneficiaries also is poor. Expansion of existing Anganwadi centers and strengthening the existing centers should be done to achieve the set goals.

Health Education regarding nutrition should be given priority in addition to Supplementary nutrition alone by ICDS.

In service training of Anganwadi workers, Supportive supervision regarding the measurement of Mid Arm Circumference, Height, Weight, and plotting of growth charts. Monitoring and periodic quick evaluation should be done.

Active involvement of the Community should be there to improve the health status of their children.

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