A HEALTH SURVEY OF BENEFICIARY CHILDREN OF KIRIYA PUSHPA FAMILY WELFARE CENTRE IN MYSORE

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ABSTRACT: INTRODUCTION: Rapid industrialization has resulted in the phenomenal growth of urban slum settlements in many big cities of India in the recent past. Slum populations living in adverse conditions represent vulnerable groups that need immediate attention. Since information regarding morbidity and nutritional status of slum children is scarce, this study was taken up to provide an insight into these aspects. **MATERIAL AND METHODS:** A Cross Sectional study was carried out in the month of October 2002.A total of 1125 subjects with 544 males and 581 females were screened. The assessment included detailed clinical evaluation, anthropometry, tests for visual acuity and laboratory investigations as required. The above data was recorded in a pretested proforma. The illnesses were grouped according to the system. Nutritional status was assessed using the indicator Weight for Age. Appropriate statistical tests were used to infer the data. **RESULTS:** Respiratory infections contributed the highest morbidity (11.30%) followed by Worm infestation (7.03%) and Skin disorders (4.36%). According to sex wise distribution respiratory infections were more frequent in females as compared to males (12.11% Vs 10.29) as also worm infestations(7.67 Vs 6.25) and Anemia(5.46% vs. 2.57).Skin disorders were more among male children(4.59 vs 4.09) as also dental caries (4.59 vs 2.21).Malnutrition was highly prevalent in the age group of 5-10 years (58.46%) and 10-15 years (33.06%).Most of the cases belonged to Grade I and Grade II malnutrition (42.92 and 38.78 respectively). **CONCLUSION:** The prevalence of acute respiratory infections, worm infestations, skin diseases, and anemia being high, proper measures should be taken to tackle these problems. To tackle the problem of malnutrition, nutritional education should be imparted to the children and their caretakers.

KEYWORDS: Morbidity, Nutritional status, Children.

INTRODUCTION: Rapid industrialization has resulted in the phenomenal growth of urban slum settlements in many big cities of India in the recent past. Slum populations living in adverse conditions represent vulnerable groups that need immediate attention.

Kriya Pushpa Family Welfare Centre is a voluntary organization affiliated to the Christian Children's Fund -which is located in a slum area in Mysore city, and sponsors the poor children hailing from slum areas of Mysore City.

Since information regarding morbidity and nutritional status of slum children is scarce, this study was taken up to provide an insight into these aspects.

MATERIAL AND METHODS: A cross-sectional study was carried out in the month of October 2002.A total of 1125 subjects with 544 males and 581 females were screened. The assessment included detailed clinical evaluation, anthropometry, tests for visual acuity and laboratory investigations as required. The above data was recorded in a pretested proforma. The illnesses were grouped

according to the system. Nutritional status was assessed using the indicator Weight for Age. Indian Academy of Pediatrics (IAP) classification was used to grade the degree of malnutrition. Appropriate statistical tests were used to infer the data.

Table 1: Age and sex distribution of the subjects

Age groups (yrs)	Sex				Total	
	Male		Female			
	Number	%	Number	%	Number	%
0-5	15	78.9	4	21.1	19	1.69
5-10	262	48.6	277	51.4	539	47.91
10-15	198	45.1	241	54.9	439	39.02
>15	69	53.91	59	46.09	128	11.38
All ages	544	48.35	581	51.65	1125	100

OBSERVATION: Among the group on the whole there were an almost equal proportion of males and females, with slightly more percentage of females (51.65 Vs 48.35). However males dominated in the 0 - 5 years age strata (78.9 Vs 21.1)

Table 2: Morbidity pattern in various age groups

Age groups (yrs)		A	B	C	D	E	F	G	H	I	J	K	NAD	Total
0-5	M	1	1	1	0	1	0	3	0	0	0	1	7	15
	F	1	0	0	2	0	0	0	l	0	0	1	1	6
	T	2	1	1	2	1	0	3	1	0	0	2	8	21
5-10	M	16	**5**	6	34	8	2	9	17	8	6	10	142	263
	F	27	11	3	33	8	2	12	8	17	6	15	136	278
	T	43	16	9	67	16	4	21	25	25	12	25	278	541
10-15	M	16	7	1	19	2	1	11	8	6	9	17	101	198
	F	15	16	4	26	10	0	8	4	5	9	19	121	237
	T	31	23	5	45	12	1	19	12	11	18	36	222	435
> 15	M	1	1	0	3	3	1	2	0	1	5	4	38	59
	F	2	5	1	10	6	2	4	0	4	1	5	29	69
	T	3	6	1	13	9	3	6	0	5	6	9	67	128
Total		79	46	16	127	38	11	49	38	41	36	72	572	1125
Prevalence		7.03	4.09	1.42	11.3	3.38	0.97	4.36	3.38	3.65	3.2	6.41	50.84	

A - Worm infestation
B - Anemia
G - Vit. A deficiency
D- Respiratory infection
E - Refractive error
F - Other eye disorders
G - Skin disorders
H - Dental caries
I - ENT disorders
j - Gastrointestinal disorders
K - Miscellaneous

OBSERVATIONS: From the above table it is observed that respiratory infections contributed the highest morbidity (11.30%) followed by Worm infestation (7.03%) and Skin disorders (4.36%). According to age distribution, it was observed that respiratory infections were found most prevalent in the age group of 5-10 years (52.75%). Worm infestations (54.43%) and skin disorders (42.85%) too were most frequent in the same age group.

Table 3: Morbidity pattern according to sex in children

Morbidity condition	Sex		Total
	Male	Female	
Worm infestation	34(6.25)	45 (7.67)	79 (7.03)
Anemia	14 (2.57	32 (5.46)	46(4.09)
Vitamin A. deficiency	8 (1.47)	32 (1.36)	46(1.42)
Respiratory infections	56 (10.29)	71 (12.11)	127 (11.30)
Refractive errors	14 (2.57)	24 (2.57)	3 8 (3.38)
Other eye disorders	4 (0.73)	7 (1.19)	11(0.97)
Skin disorders	25 (4.59)	24 (4.09)	49(4.36)
Dental caries	25 (4.59)	13 (2.21)	38(3.38)
ENT disorders	15(2.75)	26 (4.43)	41(3.65)
Gastrointestinal disorders	20(3.67)	16 (2.73)	36(3.20)
Miscellaneous	32 (5.88)	40 (6.82)	72(6.41)
Total	247	306	553

OBSERVATIONS: From the above table, it is observed that according to sex wise distribution respiratory infections were more frequent in females(12.11% Vs 10.29) as also worm infestation(7.67 Vs 6.25) and Anemia(5.46% vs 2.57).Skin disorders were more among male children(4.59 vs 4.09) as also dental caries(4.59 vs 2.21).

Significance tests (Chi-square test) for major illnesses among Males and Females.

1) Worm infestation:
   $X^2 = 0.88$, df = 1, $p<0.5$(NS)
2) Respiratory illness:
   $X^2 = 0.93$, df= 1, $p<0.5$(NS)
3) Skin diseases:
   $X^2 = 0.97$, df= 1, $p<0.5$(NS)
4) Anemia:
   $X^2 = 6.05$, df" = 1, $p<0.05$(S)
5) Dental caries:
   $X^2 = 4.9$, df = 1, $p<0.05$ (S)

It was observed that there were significant differences in the prevalence of Anemia and Dental Caries between Males and Females.

Table 4: Distribution of malnourished children according to age and sex

Age Group (Yrs)	Malnourished Children				Total	
	Male		Female			
	Number	%	Number	%	Number	%
0 - 5	2	28.57	5	71.43	7	0.80
5 - 1 0	267	52.25	244	47.74	511	58.46
1 0 - 1 5	131	45.32	158	54.67	289	33.06
>15	29	43.28	38	56.72	67	7.66
Total	429	49.08	445	50.91	874	100

OBSERVATION: From the above table, it is seen that malnutrition was highly prevalent in the age group of 5-10 years (58.46%) and 10-15 years (33.06%). Females in the age groups of 10-15 years (54.67% vs 45.32%) and above 15 years (56.72% vs 43.28%) had higher prevalence of malnutrition as compared to males. The overall prevalence was slightly higher in females as compared to males (50.91% vs 49.08%).

Table 5: Age and Sex distribution of normal and grade wise Malnutrition in percentage

Age	Sex	All groups	Normal	G r I	G r I I	G r I I I	Gr IV
0 - 5	M	40	60	20	20	0	0
	F	45.5	54.5	27.2	9	9	0
5 - 1 0	M	82.6	17.42	45.64	29.96	5.92	1.04
	F	80.2	19.8	35.57	31.65	11.76	1.12
1 0 - 15	M	92.1	7.89	30.7	39.47	21.05	0.87
	F	86.6	13.4	26.82	31.7	24.4	3.6
>15	M	97.2	2.77	27.7	36.1	25	8.33
	F	93.45	6.55	36.06	42.62	11.47	3.27
Total		83.96	19.1	42.92	38.78	16.11	2.18

OBSERVATION: From the above table, it is seen that malnutrition was highly prevalent in ail the age groups but to a lesser extent in 0 - 5 years age group and further most of the cases belonged to Grade I and Grade II malnutrition (42.92 and 38.78 respectively).

DISCUSSION: In our study the leading causes of morbidity were Respiratory infections, Worm infestations, Skin diseases and Anemia which is comparable to earlier studies by Datta Banik ND et al [1], Chandra P et al [2] , Kumar A et al[3 , Ghai OP et al[4] .

Datta Banik ND et al [1] in a morbidity study found 76.9% of total disease load due to respiratory and gastro-intestinal tract infections. In a study by Chandra P et al [2] health and nutritional status of children by, 50% had respiratory tract infections, diarrhoea and otitis media, Chandra P et al[2] Kumar a et al [3] observed among children high prevalence of respiratory illness

(24%) followed by gastroenteritis (21%) and PEM (18.5%). The major illnesses recorded by Ghai OP et al [4] were upper respiratory tract infections, skin diseases, and diarrhoeal diseases.

In our study the overall prevalence of malnutrition was 77.6% which is comparable to the findings of Luwang NC [5] who found an overall prevalence of PEM of 67.7%. In our study 42.9% were grade 1 PEM cases followed by 38.78% grade2, 16.11% grade3 and 2.18% grade 4 cases which is comparable to the study done by Srivastava JP et al[6] .Shrivatava JP et al in a study found that 36% children suffered from Grade I malnutrition while 40% Grade II malnutrition, 20% Grade III malnutrition respectively.

CONCLUSION AND RECOMMENDATIONS: From the available data, it is seen that certain illnesses like Respiratory infections, worm infestation, Anemia, Vitamin - A deficiency and Dental caries exert a considerable burden on the health and well being of the children at KPFHP.

It is recommended that certain measures like periodic mass de-worming of the children and provision of Iron and Vitamin Capsules, as supplements in addition to improving the overall nutritional status of the children will be beneficial. From the nutritional status point of view, a high proportion of children suffer from undernutrition, but a significant observation is that most of these children fall under the mild to moderate categories of malnutrition.

It is recommended that these children be monitored and care taken such that they do not slip into the more severe grades by appropriate nutritional interventions and growth monitoring and nutritional education to both the parents and the children.

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