A STUDY ABOUT PREVALENCE OF UNDER NUTRITION AMONG SLUM CHILDREN OF 0-60 MONTHS OF AGE OF MEHSANA CITY

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The health of the people is the wealth of a country and nutrition is one of the most important pre-requisite for good health. The nutritional status of the people is increasingly being recognized world over as an important indicator of development of a country. The strength of a nation in next century will be determined by how healthy and educated its people are. Prompting optimum development of the child is the responsibility of every one (Lathia M.-1997).Children differ from adults because their nutritional intake must provide not only for the replacement of tissues but also for growth(Kaushik V.- 1997).Growth assessment best defines the health and nutritional status of children ,because disturbances in health and nutrition ,regardless of their etiology, invariably affect child growth and hence provide an indirect measurement of the quality of life of an entire population(De onis et.al.-1993).Anthropometry is widely recognized as one of the useful techniques to assess the growth and nutritional status of an individual or population(Gorstein et.al.-1994).One of the basic reason is that anthropometry is highly sensitive to under nutrition (Jellife D.B.-1966).It is possible to use variety of anthropometric measures to assess the growth of a child. Among the most studied are: weight, height, arm circumference, head circumference and skin fold thickness.There are many factors responsible for under nutrition of preschool children in slum area are poor hygienic habits, insufficient food intake lack of food availability, illiteracy, socio-economic and cultural factors. **The objective of this study was to study about prevalence of under nutrition by anthropometric measurement of slum preschool children of Mehsana city.**

METHODOLOGY-The study was carried out in different slum area i.e. para area,slum area behind jilla panchayat housing, kasba area and dhobi ghat of Mehsana city of North Gujarat. It was a community based, experimental and survey among slum area. The preschool children were selected by purposive random sampling .A house to house survey was conducted in study to examine slum preschool children. The sample size of children was 100(N=100) of 0-60 months of age. Anthropometric measurements in the form of height and weight were taken using standard techniques. The body weight of each child was measured by using lever balance. The height of the children who are not able to stand, were measured in a lying posture and height of those who are able to stand were measured in a standing posture without shoes and 4 parts of their body (heel, scapula, back of the head)were attached to the wall. The heights and weights of each child were compared with National Center for Health Statistics (NCHS) references. The body mass index (BMI) of children was calculated using following formula.

$BMI = Weight (kg) / Height^2 (m)$

For the analysis of data, the children were grouped into 5 groups. The arithmetic mean SD , SEM and F value (ANOVA)were calculated . The nutritional status (weight for age ,height for age ,weight for height) were expressed in percentage. Medical officer and Nutritionist also examined all the children for the nutritional deficiency syndrome.

Null Hypothesis-1. There will be no significant relationship between age and weight of slum children. 2. There will be no significant association between heights of slum children. 3. There will be no significant relationship between age and BMI of slum children.

RESULTS AND DISCUSSIONS-A total of 100 children (M = 52,F = 48) were examined for the study. Here boys of 0-24 months of age and 49-60 months of age having less body weight compared to same age of girls. Boys of 13-48 monthsof age having higher body weight compared to same age of girls.

The A and E group boys were shorter compared to same group girls. B,C and D group were taller compared to same group girls. Rao et.al.(2007) observed similar results in their study ,that boys were taller and having higher weight compared to same age girls.Table -2 shows the F values of weight, height and BMI of slum children of Mehsana city.

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Table :1 Anthropometric measurements of slum children of Mehsana city.

Group	Age in Month	Sex	N	Wt.(kg)	Ht.(cm.)	BMI=Wt.(kg)/ht^2(m)
A	0-12	M	14	5.07 ± 0.41	60.57±1.66	13.69±1.04
		F	09	5.78 ± 0.33	62.44±1.73	14.99±1.26
B	13-24	M	09	9.2 ± 1.07	75.11±1.69	14.4+1.07
		F	11	10.0 ±1.11	73.04±1.71	18.27±1.57
C	25-36	M	04	12.13±1.23	87.25±1.94	15.87±0.74
		F	12	11.0±1.72	83.0±1.40	15.46±1.27
D	37-48	M	12	13.64±0.60	93.92±2.72	15.38±0.46
		F	09	14.17±0.51	95.44±1.11	15.53±0.44
E	49-60	M	13	13.69±0.35	91.54±0.86	16.21±0.4
		F	07	13.86±057	97.28±2.08	14.08±0.80

Values are with mean ± S.E.M.

Table :2 F value (ANOVA) of Weight, Height and BMI of slum children of Mehsana city.

Sr.no.	Particular	Sov.	Sos.	D.F.	MSS	F	Sig.
1.	Weight	SS_B	1821.16	2	910.88	25.57	sig.
		SS_W	34582.84	97	35.60		
		SS_T	5274.16	99			
2.	Height	SS_B	18680.04	2	9340.02	108.31	sig.
		SS_W	8363.96	97	83.23		
		SS_T	2704.4	99			
3.	BMI	SS_B	72.73	2	36.37	2.07	sig.
		SS_W	1703.95	97	17.57		
		SS_T	1776.68	99			

All the value of "F" were significant at 0.5 level and proved that according to age weight, height and body mass index increases gradually. All the slum children were also examined for nutritional status i.e. weight for age, height for age, weight for height.Table-3 shows nutritional status of slum children of 0-60 months of age.

Table- 3 Nutritional status of slum children of 0-60 months of age of Mehsana city.

No.	Particular	Male	Female
1	Underweight(wt./age)	47%	39%
2	Stunted (ht. /age)	39%	31%
3	Wasting (wt. /ht.)	28%	28%

Out of 100 ,47% boys and 39% girls were in underweight condition.39% boys and 31 % girls were stunted and 28% boys and 28% girls in wasting condition. UNICEF (Bellamy –1998) reported that 183 million under 5 years old children in world suffer from stunting and under weight.Wright et.al.(2006) and Olsen et.al.(2006) showed that not only food habituation but also socio-economic factors affect on prevention of malnutrition. More than 60% children having micro nutrient deficiency symptoms like dull and rough hair and skin, paleness of skin,cheilosis, angular stomatitis, teeth decay, dyspigmentation of hair,easy pluckability moon face, pale conjuctiva odema,scarlet and raw tongue mottled enamel, muscle wasting were observed by the Medical officer and Nutritionist .

CONCLUSIONS-The present study revealed that the wide spread prevalence of under nutrition among slum children of Mehsana city. They need special dietary and medical treatments.

RECOMMENDATION-* Health and Nutrition education of the community. * Availability of suitable weaning foods at lower cost.* Provision of safe drinking water. * Toilet facilities. * Improvement of environmental sanitation. *Encouraging use of soap. * Improvement of Nutritional status of children by various programmes like ICDS, Chiranjivi,Bal sakha yojana, SNP, food fortification and Nirogi bal varsh yojana. * Education of mothers and Immunization programme . * Improve housing condition.

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