ASSESS THE NUTRITIONAL STATUS AMONG PRESCHOOL CHILDREN IN SELECTED RURAL AND URBAN AREAS AT DHARAPURAM WITH A VIEW TO DEVELOP A SELF INSTRUCTIONAL MODULE ON PREVENTION OF NUTRITIONAL DEFICIENCIES

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ABSTRACT

Preschoolers are emerging as creative persons who are preparing for their role in society. Nutrition forms the most pre-dominant influence on the development of child. The study aimed to compare the nutritional status among pre-school children in selected rural and urban areas at Dharapuram. Descriptive Comparative design was used in this study. 200 samples of preschool children (100 rural+100 urban) were selected by convenience sampling technique nutritional status weight for age, height for age, weight for height was assessed. Nutritional deficiencies were assessed by using observation checklist. The study finding showed that there is difference in Nutritional status according to weight for age (Z-Value-2.1) and height for age (Z Value-7.3) at P<0.05 Level. Vitamin A deficiency at rural area was 47% and at urban area was 34%. Iron deficiency.

KEYWORDS

Nutritional status, Pre-school children and Self-Instructional Module.

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INTRODUCTION

Children grow and develop best in an environment of warm and human relationship. They need to be effectively nutured as they move from one stage of development to the next.

Pre School children are emerging as creative persons who are preparing for future role in society. The need physical health, affection and protection from their parents,

Growth is a measure of physical maturation it signifies an increase in the size of the body and its

various organs. It is measured in term of centimeter and kilogram.

Development is a measure of functional or physiological maturation and myelination of the nervous system. It signifies accomplishment of mental, emotional, social and family abilities.

Under nutrition is the outcome of insufficient food intake. It includes being underweight for one's age, too short for one's age (stunted) dangerously thin for one's height (wasted) and deficient in Vitamins and minerals (micronutrient malnutrition).

Children are defined as stunted if they typically have short height and low body masses for their age. It is caused by long term insufficient nutrient intake.

Wasting in children is a symptom of acute under nutrition usually as a consequence of insufficient food intake or a high incidence of infectious diseases. Wasting in turn impairs the functioning of the immune system.

Nutritional Status is the condition of the body in those respect influenced by the diet, the level of nutrient in the body and the ability of these level to maintain normal metabolic integrity. Various technique are used to assess the nutritional status like clinical examination, anthropometry and biochemical methods.

OBJECTIVES

1. To assess the nutritional status among preschool children in rural and urban area.
2. To compare the nutritional status among pre-school children in rural and urban area.
3. To assess the nutritional deficiencies among preschool children in rural and urban area.
4. To find association between nutritional status of preschool children with selected demographic variable in rural and urban area.

HYPOTHESIS

H1: There is significant difference in Nutritional status among pre-school children in rural and urban area.

H2: There is a significant association between nutritional statuses of preschool children with their selected demographic variable in rural area.

H3: There is a significant association between nutritional statuses of preschool children with their selected demographic variables in urban area.

MATERIAL AND METHODS

Descriptive comparative design was used in the study. Rural area Manakadavu, Therpatti and Kalapatti villages and urban area Nanchiyampalayam at Dharapuram were chosen for the study. 200 Pre-school children (100 rural and 100 urban were selected by convience sampling technique. Nutritional status was assessed by measuring weight by standard weighing machine and height was measured by inch tape with child standing erect on the floor. Nutritional deficiencies was assessed by using observation checklist containing 20 items with yes or no options, Nutritional status weight for age was calculated and compaired with WHO Standard, Height for age was calculated based on water low classification and weight for height was calculated using WHO/NCHS standards.

RESULTS

Table No.1: Shows among 200 preschool children according to weight for age 59% in rural and 80% in urban had normal weight, 41% in rural and 20% in urban had underweight.

Table No.2: Shows among 200 preschool children according to their height for age 19% in rural and 61% in urban had normal height for age and 81% in rural and 39% in urban had stunting.

Table No.3: Shows among 200 preschool children according to weight for height 85% in rural and 89% in urban fall under<2SD had normal nutritional status and 15% in rural and 11% in urban fall under >2SD had wasting.

Table No.4: Shows that among 200 preschool children the mean and SD for weight for age in rural area the mean value is 12.8 (SD±2.3) and urban are 13.5 (SD±2.6). The Z value is 2.1 significant at 0.05level.

Table No.5: Shows that among 200 preschool children the mean and SD for height for age in rural area the mean value is 89.4 (SD±6) and in urban area 95.9 (SD±13.9). The Z value is 7.3 at 0.05 level.

Table No.6: Shows among 200 preschool children 33% in rural and 31% urban had protein deficiency, 40% in rural and 34% in urban had iron deficiency, 15% in urban had vitamin A deficiency, 47% in rural and 39% in urban had vitamin B Deficiency, 17% in rural and 10% in urban had vitamin C Deficiency and 3% in rural had Vitamin D deficiency.

DISCUSSION

The aim of the study was to compare the nutritional status of pre-school children in selected rural and urban area at Dharapuram. Descriptive comparative design was used in the study. Nutritional status was assessed by measuring the weight and height. Nutrition deficiencies were assessed by using observational checklist. Data was analyzed by using descriptive and inferential statistic [z 'test'].

Discussion on finding was based on objective of the study. The finding revealed that in comparison of weight for age among 200 children in rural and urban area mean and standard deviation are 12.8 [SD±2.3] in rural and 13.5 [SD±2.6] in urban area. Mean difference is 1.7 and Z value is 2.1 significant at $P<0.05$ level Comparison of height for age among 200 preschool children urban area mean and standard deviation as 89.4 (SD±6.0) and 95.9 (SD+6.9) significant at $P<0.05\%$. mean Difference is 6.9 and Z value is 7.3 significant at $P<0.05\%$.

Comparison of weight for height among 200 pre-school children in rural and urban area shows frequency percentage distribution like 85 (85%) in rural and 89 (89%) in urban is normal 15 (15%) in rural and 11 (11%) in urban are wasted.

This finding was supported by Yadav Rj *et al* who conducted a study among 1847 preschool children. Results showed prevalence of Stunting was 60% and underweight 55% in boys and girl. Wasting was frequent in girls 34.5% at urban and 16.3% in rural. Wasting in boys 34.9% urban and 18.1% in rural.

Assessment of Nutritional deficiencies among 100 preschool children in rural area 33% had protein deficiency, 40% had iron deficiency and1 child had calcium deficiency, 47% had vitamin A deficiency 20% had Vitamin B Deficiency, 17% had vitamin C deficiency and 3% had Vitamin D Deficiency.

Among 100 preschool children in urban area 31% had protein deficiency 34% had iron deficiency and 15% had Vitamin A deficiency, 39% had vitamin B deficiency and 10% had Vitamin C Deficiency.

This finding was supported by study finding of Crojal Fernandez D.*et al* Results revealed that 30% of preschool children were at risk of Vitamin A Deficiency. On comparison children's risk of nutritional deficiency was high in rural area 38.9% than urban area 28%.

Table No.1: Comparison of Nutritional Status among Pre-School Children in Rural and Urban Area

S.No	Nutritional Status	Weight kg percentile	Variable			
			Rural		Urban	
			Frequency	Percentage	Frequency	Percentage
1	Normal	3rd-50th	59	59%	80	80%
2	Underweight	<3rd	41	41%	20	20%

Table No.2: Comparison of Frequency and Percentage Distribution of Preschool Children According to Their Height for Age in Rural and Urban Area

S.No	Nutritional Status	Weight kg percentile	Variable			
			Rural		Urban	
			Frequency	Percentage	Frequency	Percentage
1	Normal	>95	19	19%	61	61%
2	Stunting	<95	81	81%	39	39%

Table No.3: Comparison of Frequency and Percentage Distribution of Preschool Children According to Their Weight for Height in Rural and Urban Area

S.No	Nutritional Status	Weight for height "Z" Score	Variable			
			Rural		Urban	
			Frequency	Percentage	Frequency	Percentage
1	Normal	<2SD	85	85%	89	89%
2	Wasting	>2SD	15	15%	11	11%

Table No.4: Comparison of Mean, Standard Deviation and Z Value According To Weight for Age among Preschool Children in Rural and Urban Area

N=200

S.No	Variable	Mean	SD	Mean Difference	Z Test	Table Z Value
1	Rural	12.8	2.3	0.7	2.1	1.96
2	Urban	13.5	2.6			

(P<0.05)

Table No.5: Comparison of Men, Standard Deviation and Z Value According To Height for Age among Preschool Children in Rural and Urban Area

N=200

S.No	Variable	Mean	SD	Mean Difference	Z Test	Table Z Value
1	Rural	89.4	6.0	0.7	7.3	1.96
2	Urban	95.9	6.7			

(p<0.05)

Table No.6: Assessment of Nutritional Deficiencies among Pre-School Children in Rural and Urban Area

N=200

S.No	Symptoms of Nutritional deficiencies	Rural		Urban	
		Frequency	%	Frequency	%
Protein					
1	Silky brown hair	33	33	31	31
2	Puffiness of face	25	25	8	8
3	Swelling in the feet	18	18	6	6
Iron					
4	Pale Conjunctiva	40	40	34	34
5	Pale tongue	38	38	31	31
6	Pale Nails	36	36	34	34
7	Fatigue	19	19	03	03
8	Poor appetite	19	19	03	03
Calcium					
9	Wide Wrist	1	1	0	0
10	Bowlegs	1	1	0	0
Vitamin A					
11	Not able to see is dim light	0	0	0	0
12	Dry conjunctiva	0	0	0	0
13	Triangular pearly white foamy spots on bulbar conjunctiva	15	15	15	15
Vitamin B					

14	Cracks in corners of the lips	47	47	39	39
15	Redness of the tongue	32	32	22	22
Vitamin C					
16	Bleeding Gums	17	17	10	10
17	Swollen Gums	15	15	10	10
Vitamin C					
18	Curved legs	3	3	3	3
19	Knock knees	0	0	0	0
20	Projected sternum	0	0	0	0

CONCLUSION

The present study compared the nutritional status among preschool children in rural and urban area. Finding revealed that there was significant difference in the nutritional status among preschool children in rural and urban area as indicated like the weight for age Z Value 2.1 which is significant at $P<0.05\%$ and height for age Z Value 7.3 significant at $P<0.05\%$. Hence the nutritional status of rural. Preschool children were lower than the urban pre-school children.

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CONFLICT OF INTEREST

We declare that we have no conflict of interest.

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