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Dietary Intake and Anthropometric Measurements of Children in Below Poverty Line (B.P.L) Group.

Dr. Punam Y. Choudhary.
Assistant Professor, Indirabai Meghe Mahila Mahavidyalaya, Amravati.

Introduction: Nutritional status maybe defined as the condition of nutrition of individual child or community. The assessment of nutritional status is very essential for every individual as well as community.

Rabindranath Tagore stated that birth of a baby is not only phenomenon, it is human life nourishment for better universe.

The child growth does not mean the overall development, it is related with body length, muscle weight, height, weight and BMI. The importance of nutrition to health and countless and endless. Better nourishment for every individual will produce better ability and capacity to fight against all infections. Iron is the most vital component for growth and development of brain tissue. Iron deficiency makes nerve impulses to move slower and may cause permanent damage or deformity to the child brain.

The effect of diet is measured in terms of nutritional status. Dietary method of assessing the food intake for nutritional status of every individual. The individual dietary intake data collected helps in assessing every individual nutritional status. Poor diets are high in saturated fats, added sugars and sodium and low in fruits and vegetables, legumes and whole grains.

When a child consumes sugary processed foods and high fat foods, it takes toll on the functions of the digestive system. Overall a well balanced healthy and nutritionally rich diet is of a paramount importance for the developing child.

In view of it the present study was undertaken with following objectives.

Objectives:

1. To study the dietary intake of preschool (B.P.L.) children.
2. To study the Anthropometric measurement of (B.P.L) preschool children.

Hypothesis:

1. Dietary intake is below WHO standards.
2. Anthropometric measurements are as per norms.

Review of Literature:

1. Anna Oblacinska et al.(2010) : Assessment of growth and development is major component in early pediatric healthcare. WHO published the growth standards for the children upto age 5 years. The study based on WHO standards and anthropometric parameters concluded that the children below 5 years were seen following the WHO standards, small difference in 3rd percentile less than 2% B.M.I. values were found slightly lower for the first six months of life for the overweight and obesity weight status. Nutritional assessment of children below 5 should based on WHO standards.

2. Saraswathi et. al.(2011): Child under weight is predominant in rural preschool also total body fat percentage is much below prescribing limits. Poor hygiene increases the burden of childhood illness and depress child appetite, inhibits nutrient absorption , increases calories consumption during fevers and in fighting infections contributing to child malnutrition.

3. Sethy et. al. (2017): Studied nutritional status and BMI of children from Berhampur city slum area. A sample of 300 children was selected for the study. The study concluded that 69% were undernourished, 55.3%underweight, 75%wasting, 42%stunting. Maternal education, faulty feeding practices and unhygienic practices and conditions are contributory factors of malnutrition.

Methodology:

Present study was conducted in slum areas of Amravati city. A sample of 50 children with age 4-5 years from families below poverty line (B.P.L.) were included in the study. Data on height, weight and dietary intake by three days recall method was recorded.

The diet was analyzed for protein, calories, calcium, vitamin C, iron, vitamin A and vitamin B12. The mean values for sampled data were compared with WHO (2006) standards. Z-Test was used as sample greater than 30. The data collected pertains to February 2024.

Results and Discussion:

The dietary intake of children in 4-5years age and both sexes was analyzed for each day separately and average intake on the bases of 3 days were calculated and presented in Table 1.

Table 1: Dietary intake of selected (B.P.L.) children (Age 4-6 years)

Sr. No.	Statistic	Protein	Calories	Calcium	Vitamin C	Iron	Vitamin A	Vitamin B12
1	Mean	23.26	1135.24	390.18	10.74	10.89	30.34	8.34
2	S.D.	12.38	8.24	23.6	1.72	1.04	3.86	1.42
3	WHO -2006	20.1	13.6	600	25	13	40	12

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4	Z-Value	1.33NS	2.72**	8.91**	8.29**	2.02*	2.51*	2.58**

N.S. Non significant

* Significant at 5% level of significance

** Significant at 1 % level of significance

After going through table 1, it is observed that protein intake was at par with WHO 2006 standards. Calories, calcium, vitamin C, Iron, Vitamin A and Vitamin B12 intake was significantly lower than WHO 2006 standards Concluding diet taken by children does not meet standards. It needs attention.

Table 2: Height, weight and B.M.I. of selected children.

Sr.No.	Statistics	Height	Weight	B.M.I.
1	Mean	113.42	16.12	19.17
2	S.D.	4.92	4.59	0.98
3	WHO - 2006 Standards	118	18.3	-
4	Z- value	0.93NS	0.48NS	

NS: Non-significant.

The data presented in table 2 on height, weight and B.M.I indicated that height and weight of children was lower than standard values. However, differences were non-significant . Overall B.M.I. was 19.17 indicating majority of children having B.M.I. below 18 indicating underweight.

The hypothesis stated in the study were accepted.

Conclusions:

1. Calories, calcium, vitamin C, iron, vitamin A and Vitamin B12 intake was significantly lower than WHO standards.
2. Height and weight of children was lower than standards.
3. Underweight children were observed.
4. Hypothesis stated in the study was accepted.

References:

1. Anna Oblacinska et al. (2010), WHO(2006), Child growth standards length/height and weight for age.
2. Saraswathi Y.S. et al.(2011) "Occurrence of childhood obesity in school children from rural and urban areas in Mysore, Karnataka" , Indian Journal of Life Sciences Vol. 3 ,Page No. 51-55.
3. Sethy et al. (2017) "Occurrence of malnutrition among under 5 children of urban slums", Indian Journal of Contemp. Pediatrics, Vol.4, Page No. 2180-2186.