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Research Paper :

Diet and nutritional status of Preschool children: A study of rural anganwadi children of Bhagalpur district of Bihar

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ABSTRACT

The present study was conducted in rural AWCs of Bhagalpur. A sample of 200 children were randomly selected from the AWCs. The data were calculated on the basis of some parameters like body weight, height, general appearance, and frequency and adequacy of diet of the children. The data of general appearance of the children indicated that 12% were thin, 44% were sick, and 44% normal. When it was interrelated with weight and height, it was found that approximately 72% children were under weight due to low intake of calcium and protein diet. When holistic nutritional status was evaluated it was found that 16% were normal and 84% were either undernourished or severely malnourished due to low dietary intake. ICDS has recommended SNP 500K/cal./day in the form of hot cooked meal and snacks, but merely 100-200 k.cal. is provided at the AWCs.It means the children are getting far less than recommended calorie.

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Key words : Diet, Nutrition, Preschool children, Anganwadi centre

The preschool period of child is very important for growth and development (Craig, 1979). Diet and nutrition are important factors in the preschool (3-6 years) age. Preschool children represent 12 per cent of the general population in India. A large majority of these children live in rural and tribal areas and urban slums. Their development is in the interest of the total national development. The preschool age mortality in India is as high as 4.9 % of all deaths. This high mortality which is largely due to the malnutrition and infection is characteristics of this age group in underprivileged areas. The data on the morbidity of preschool children are scarce. In this age group, the children are usually victims of PEM accompanied by retarded growth and development. Survey indicates that the main morbidity problems are due to malnutrition. The importance of 3-6 years of life of children for their growth and development is well known. The concept of vulnerability calls for preventive care and special actions to meet the supplementary nutrition and dietary needs inherent in the process of human growth and development (Ghai, 2009).

Integrated child development service (ICDS):

Currently it is the most important scheme in the field of child welfare The objectives of ICDS scheme are, to improve the nutritional and health status of children in the age group 0-6 years, lay the mortality and morbidity, malnutrition and school drop–out .to achieve effective co-ordination of policy and implementation amongst the various departments of child development and to enhance capability of mother to look after the normal health and nutritional needs of the child through proper nutrition and health education. Anganwadi provides the services to bridge the caloric gap between the national recommended and average intake of children and women. The Government of India provides 4 Rupees for malnourished children and 6 Rupees for severely malnourished children. Calorie wise provision is 500 k/cal per day for malnourished children and 800k/cal for severely malnourished children that are twice-one in the form of snacks in the morning and other is hot cooked meal/khichdi in afternoon. The present study was designed according to the objectives, to evaluate health and nutritional status of the preschool children enrolled in Anganwadi Centers (AWCs), to know the complete dietary intake and frequency of the meal in a day including the food provided at AWCs, to compare their dietary intake with RDA by ICMR and to count the calorie of the food provided by AWCs.

EXPERIMENTAL PROCEDURE

200 preschool children (3-5years) both male and

female were randomly selected from a total of 30 rural AWCs of Bhagalpur district of Bihar. The duration of the study was 5 months (October 2010 to February 2011).

Research tools and technique:

Questionnaire and interview technique was used to obtain the dietary intake of previous day including the diet provided at AWCs. The data were collected on the basis of the health and nutrition status by some parameters, like weight, height, general appearance, frequency and adequacy of diet of the children. To acquire the correct data, the parents of their children were also interviewed.

OBSERVATIONS AND ANALYSIS

The data obtained were classified in several requisite groups and were presented through tables and graphs. On the basis of norms recommended by ICMR and requisite RDA , all the obtained data were compared. The following tables and their analysis indicate the actual dietary intake, health and nutritional status on different parameters.

When the general appearance of the children analysed it was found that 12% were thin and 44% were sick, when put together it became 56% which was 10% more than the children who were found to be normal in general appearance (Fig. 1).

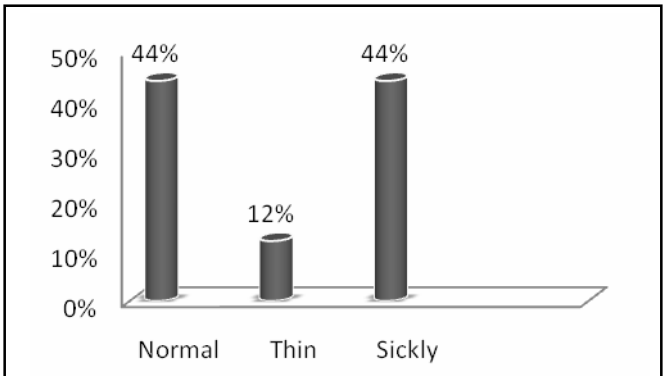

Fig. 1: General appearance

When it was interrelated with weight and height, it was found approximately 3/4 th of the children were underweight when compared to standard weight and standard height (Fig. 2). This could be due to low intake of calcium and protein.

When it was correlated, calorie intake according to guideline of ICDS, 500k.cal. should be provided to the children as SNP in the form of Khichdi and snacks but AWCs in study area was providing merely 200-300 cal. to 90% children of AWCs. Thus, they were getting less than half of the recommended calorie (Fig. 3).

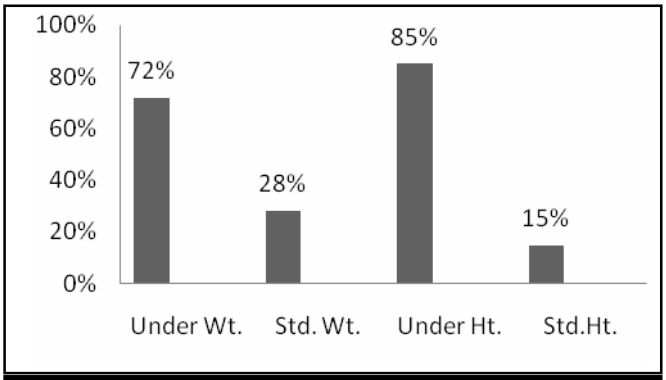

Fig. 2: Weight and height

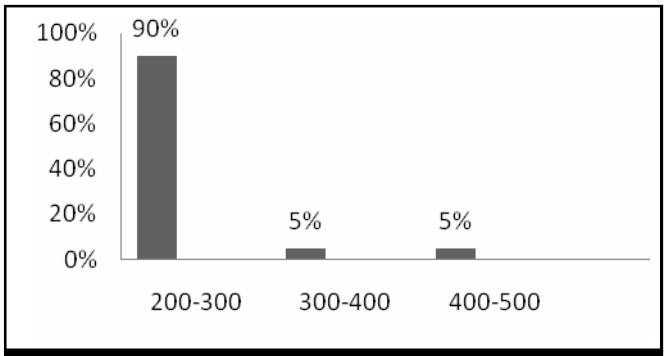

Fig. 3: Supplementary nutrition provided at AWCs by ICDS (in K.cal)

Fig. 4 shows that the 38% children of AWCs received only 700-900 k/cal per day, where as 44% got 900 to 1100 k/cal, 12% children got less than 1300 k/cal and 4% less than 1500 k/cal, only 2% children were lucky enough to get required calorie per day.

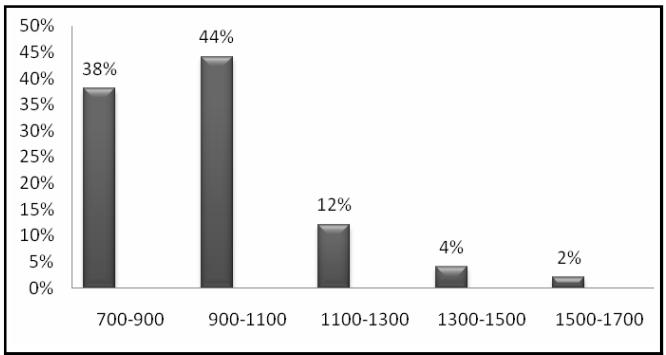

Fig. 4: Daily calorie intake of the children (in K/Cal)

When holistic nutritional status was evaluated ,it was found that only 16 % children were normal and 84% were either undernourished or severely malnourished .When it was bifurcated, it was found that severely malnourished to undernourished the ratio was 1:2 (Fig. 5).

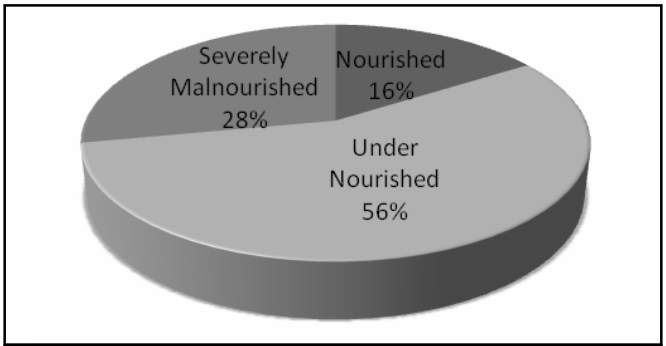

Fig. 5: Nutritional status

Conclusion:

The findings of the present study suggest that the dietary intake of the Anganwadi children in the age group of 3-5 years is far less than required dietary intake. There was far gap between the RDA for these age group children and actual calorie intake. This has significant impact on the various health parameters, as most of the children were found to be thin, sickly and malnourished. Most of the children were found underweight and undeheight, therefore it can be concluded that the real performance is far behind the target of the national mega project.

For the sufficient calorie intake as per the recommendation of the AWCs, the children should be served two meals in the period of 5 hours stay at the AWCs, *i.e.* firstly just after arrival they should be given fruits, eggs or snacks and secondly cooked meal in noon. This should be strictly adhered to if we want better workforce in future. This should be granted from both the sides that is from parents and AWCs. Superior officers and concerning persons should take interest in the matter.

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