

DIETARY INTAKE AND NUTRITIONAL STATUS OF SCHOOL CHILDREN OF KUMAON HILLS

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ABSTRACT

Inadequate nutrition in childhood may lead to malnutrition, growth retardation, reduced work capacity and poor mental and social development. The requirement of energy, protein and calcium in children of Kumaon hills were met upto 50 to 75 per cent of RDA and that of niacin was met upto 70-85 per cent. Intake of iron, carotene and riboflavin was most inadequate. This inadequate intake of nutrient was reflected in their anthropometric measurements which revealed that average height and weight of the population under study was less than the Indian well-to-do male and female children of the same age group as given by ICMR (1989). Based on Waterlow classification, only 45.0 per cent subjects were normal and remaining had varying degrees of malnutrition.

Key words : Nutritional status, Children, Anthropometric measurements, Per cent RDA, Dietary intake

Children are our future citizens. They form an important segment of any community. They contribute to the vital human potential and in future would impart strength to the national economy and development. Better the nutritional status of the children, higher will be their mental agility, functional capabilities and will lead to the nation's rise. Despite exemplary medical advances and technological progress, good health and well-being continue to elude a large majority of the world's population. Nutrition, being a critical determinant of human health, good health becomes all the more elusive in the presence of malnutrition (Bhaskaram, 2001). Despite various programs being run in the country, the nutritional status of 33 per cent females and 28 per cent males is below normal. The condition of children is worse as about 46 per cent children of 0-6 years age are underweight in India and the percentage of children categorized as underweight in Uttarakhand is 38 (NFHS, 2006). Malnutrition is not a simple matter of whether a child can satisfy his or her appetite. A child who eats enough to satisfy immediate hunger can still be malnourished. Three quarters of the children who die worldwide of malnutrition related causes are mildly to moderately malnourished and betray no outward signs of problems. Of the nearby 12 million children under five who die each year in developing countries mainly from preventable causes, the deaths of

over 6 million are either directly or indirectly attributable to malnutrition (UNICEF, 1998).

METHODOLOGY

A total of 160 subjects, aged 10-15 years, were randomly selected from three middle schools and two inter colleges of Bhimtal block in Nainital district of Uttarakhand state. Subjects were interviewed for obtaining general information, dietary intake and anthropometric data using pre-tested survey schedules. The general information regarding the subjects included type of family, family size, number of children in the family, total family income, education and occupation of the parents and per capita income. For anthropometric data, measurements were taken in triplicate and average value was recorded. Means of body weights and heights were computed for male and female subjects separately. The extent of malnutrition in children was assessed by Waterlow classification based on height for age and weight for height. For dietary survey, subjects were given out the developed proforma for filling in diets consumed by them for two days. Household measures such as *katories*, glasses and models of *chapaties* of different diameter were shown to assist them to fill in the amounts correctly. Nutritive value of diets consumed per day by the children was calculated in terms of energy, protein, calcium, iron, α -carotene, thiamine, riboflavin, niacin and vitamin 'C' using the food composition tables of Gopalan *et al.* (1989). Average daily intake was thereafter computed and compared with the ICMR (1989) recommendations. Data on consumption