

Dietary Status of Children of Udaipur District

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INTRODUCTION

In India, a staggering 320 billion people live below the poverty line resulting in widespread prevalence of undernutrition. The growing childhood years are more critical since the curse of undernutrition is more pronounced. Nearly 50 per cent children below 5 years are malnourished. Since the mothers are malnourished, one third of the new born are of low weight and the nutritional deficiency diseases such as anemia, iodine deficiency disorders, vitamin A deficiency and PEM still exist and by adversely affecting the working capacity of the man power is creating a dent on national economy.

Although, in the last two decades, we have witnessed phenomenal progress in the sphere of agricultural production. The green revolution has enabled us to increase the food grains production from 50.9 million tones in 1950 to 198.2 million tones in 1999. Similarly white revolution has made India number one in milk production and sufficient increase is reported in marine and freshwater fishes due to success in blue revolution. We are also largest producer of vegetables and fruits.

However, production alone does not always ensure food and nutrition security at household level. Food security entails the availability, accessibility, adequacy as well as acceptability of food. All these have to be looked into carefully to tackle the problems of malnutrition. Thus, the issue can be divided into three main components, viz. food production and availability, food access at household level and food utilization by the poorest people.

Nutrition is pre-requisite for optimal growth and development of children. A diet inadequate in quantity and quality is a relevant factor affecting growth and development. While malnutrition affects the people of all ages, it is agreed that children in general are worst sufferers (Swaminathan, 1990)

Children, (both preschoolers and school age) being future citizens form an important segment of the Indian population. Good nutrition of the children is an indispensable component of healthy

life. It is also a determinant of healthy growth of mind and body. (Balgir et al., 2002). Hence, present investigation has been undertaken to study the dietary status of 1-12 years old children.

METHODOLOGY

The research work undertaken was carried out in following steps:

Locale of the Study: The survey was conducted in Udaipur district of Rajasthan state. For the purpose, three blocks out of ten blocks of Udaipur district were randomly selected. Four villages from each block were purposively selected keeping in view the established linkages, ease of approach and feasibility to work. Thus, the survey was conducted in 12 villages. The selected villages were in the vicinity of 20-55 km from Udaipur city.

Selection of Sample: For household survey, a total of 300 families were selected with equal representation from each village i.e. 25 families each from 12 villages. Chief lady and/or the subject of the household was contacted, briefed about the purpose of the study and was interviewed to obtain desired information using pre-tested interview schedule. Interview technique was used keeping in view the illiteracy/functional literacy of the rural women.

Dietary Survey: Besides, personnel particulars of the subjects, a dietary survey using "24 hours recall method" was conducted using the standardized cupset to find out the intake of various foods in different meals of a day. Consumption of cooked food by the subjects was recorded in terms of household measures/number to find out the quantum of raw food intake. The nutrient content of the diets was worked out using food composition tables (Gopalan, et al., 1989).

RESULTS AND DISCUSSION

The mean daily intake of nutrients by the children of different age groups has been presented in tables 1 and 2. Average nutrient intake by different age groups was compared with their respective RDA and percent adequacy for all the

nutrients was worked out.

Perusal of data in table 1 reveals that percent adequacy of energy was very low in preschool and school going children with intake below 50 percent of their respective RDAs. However, it was little higher in case of children in age group of 10-12 years.

This calorie gap was mainly due to the low calorie density of their diets with inadequate intake of oils and fats. The amount being little higher in the diets of 10-12 year old children was reflected in their relatively higher energy intake. Malhotra and Rao (1984) in their study on dietary status of rural school children also reported lower calorie consumption by their study subjects. However, percent deficit observed by them was more (39.4%) in case of 13-15 years old children as compared to that (32.9%) observed for 6 year old children.

The average protein intake as can be seen from table 1, ranged from 16.5g to 39.7g per day which cannot be considered adequate. Lesser intake of milk & milk products could be the contributory factor. Together with this, the quality of protein was also poor as the source of protein were the foods of vegetable origin.

Similarly, calcium and iron intakes were also below 50 percent of the recommended levels by almost all groups under study indicating low to

very low consumption of milk & milk products & green leafy vegetables. Kumari and Singh (2001) in their study on nutritional status of 6-12 years old children reported similar pattern of low intakes of almost all the dietary essentials attributing low intake of green leafy vegetables, milk & milk products as the possible reasons responsible for such observations.

Table 2 presents the average vitamin intake of the study population and observations here were not in any way different, for diets of rural children was deficient in vitamin contents also.

Udaipur region is facing severe draught since last 4-5 years which is reflected in the diets also as β -carotene and ascorbic acid were highly deficient in the diets of the study children. Findings of an earlier study (Easwaran and Devdas, 1984) also portrayed exactly same trend of observations where the diets of children were found to be deficient in energy, calcium, β -carotene and vitamin-C contents.

Unlike the observations for other nutrients, thiamin intake by the study group was invariably higher. This could be due to the fact that in the study villages green chilies were being consumed in the form of curry which contained good amount of thiamine.

Again lower riboflavin intake (<50% RDA) was associated with poor inclusion of milk &

Table 1: Average nutrient intake of the subjects

Age group (years)	No. of children (N=571)	Energy		Protein		Fat		Calcium		Iron	
		KCal	% adeq-uacy	g	% adeq-uacy	g	% adeq-uacy	mg	% adeq-uacy	mg	% adeq-uacy
1-3	85	539	43.5	16.5	75.1	7.6	37.3	157.5	39.4	5.2	43.3
4-6	150	782	46.2	24.5	82.0	12.2	49.2	193.6	48.4	8.1	45.0
7-9	146	832	42.6	30.5	74.5	16.8	69.5	234.9	58.7	10.1	38.8
10-12(B)	110	1170	53.4	36.6	67.9	19.9	90.5	240.9	40.2	12.0	35.3
10-12(G)	80	1243	63.1	39.7	69.8	19.9	90.8	287.2	47.9	13.4	70.5

Table 2: Average vitamin intake of the subjects

Age group (years)	No. of children (N=571)	β Carotene		Thiamine		Vitamin C		Riboflavin		Niacin	
		μ g	% adeq-uacy	mg	% adeq-uacy	mg	% adeq-uacy	mg	% adeq-uacy	mg	% adeq-uacy
1-3	85	169	10.6	0.5	83.3	7.8	19.6	0.3	42.9	3.9	48.8
4-6	150	254	15.6	0.8	88.9	12.4	31.3	0.4	40.0	6.3	57.3
7-9	146	294	12.3	1.1	110.0	21.1	52.9	0.5	41.7	7.9	60.8
10-12(B)	110	278	11.6	1.3	118.2	16.6	41.6	0.6	46.2	9.6	64.0
10-12(G)	80	305	12.7	1.4	140.0	15.6	39.2	0.6	50.0	11.1	85.4

milk products, whereas niacin intake was found relatively satisfactory.

Thus the results of the present study revealed that children belonging to different age groups were exhibiting reduced intake of all the dietary essentials. Another study on dietary survey of preschool children by Jose and Indira (2001) also pointed towards a poor intake of foods both in terms of quantity and quality.

Low purchasing power of the rural families, illiteracy, ignorance and lack of appropriate nutrition knowledge are some of the reasons behind such observations. Thus, there is an urgent need to educate the rural masses about the easy to adopt methods of improving their diets from nutritional point of view especially the micronutrients.

ACKNOWLEDGEMENTS

This study is a part of NATP on "Gender Perspective in Farm and Home Management and Utilization of Underutilized Foods Towards Household Nutrition Security." Hence, the financial support received is duly acknowledged

KEYWORDS Nutrition. Dietary Essentials. Health Status. Rajasthan

ABSTRACT The present study was undertaken with the objective to assess dietary status of 571 children of 1-12 yrs of age, selected from twelve villages of three blocks (Sarada, Badgaon and Jhadol) of Udaipur district. Findings of the dietary survey conducted using 24 hours recall method reveals variable inadequacies of dietary essentials with situation being more critical in case of β Carotene intake which was not even one fifth of the day's requirement. Intake of almost all other nutrients was less than 73% of their respective RDAs.

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