

Effect of Mother's Education on Mean Nutrient Intake of School Going Children



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Abstract

School going children form an important vulnerable segment of the nation's population. They constitute 20-25 per cent of the total population in India. The school age period is nutritionally significant because this is the prime time to build up body stores of nutrients in preparation for rapid growth of adolescence. The development of child's eating habit is strongly influenced by the family, particularly by the parents. As children are born without innate ability to choose a nutritious diet, they learn their food habits through experience and education. The present study was conducted in Rohtak district, Haryana to assess the nutritional status of 7-9 years school going children. A total of 200 school going children were selected randomly from four different schools in the study area and find out the socio-economic status and effect of mother's education on mean nutrient intake of school going children.

Keywords: Education, Nutrient, School Going Children.

Introduction

The future of our nation and the prosperity of our people depend on the health and happiness of our children and the care they receive from family and society to grow up as good human beings and citizens. Their upbringing in a proper environment promoting their health, education and mental development is an important commitment. It must be acknowledged that children are valuable human resource who will contribute substantially to the national economy, development and progress. The foundation of good health and sound mind is laid during the school age period. So it is basic milestone in the life of an individual and responsible for many changes that take place during later life. The consequences of malnutrition among school age children includes stunted growth, underweight, anaemia, iodine deficiency and other health related problems such as malaria, diarrhoea, worm and respiratory infection. The most common types of morbidities reported among children in India during present days consist of fever (14%) diarrhoea (4%) and respiratory infections up to 4 per cent (Venkataiah *et al.*, 2006). Among these problems, stunting occurs due to exposure to poor nutrition in early childhood period. Nearly 12 million children, who die each year in developing countries mainly from preventable causes, the deaths of over 6 million or 55 per cent, are either directly or indirectly attributed to malnutrition. The school age period is nutritionally significant because this is the prime time to build up body stores of nutrients in preparation for rapid growth of adolescence. The development of child's eating habit is strongly influenced by the family, particularly by the parents. As children are born without innate ability to choose a nutritious diet, they learn their food habits through experience and education.

Aim of the Study

The aim of the study is to create awareness among nutrient intake of school going children. Assessment of nutritional status will help them to improve the health status of their children. In this study the role of mother's education is emphasized which will help in improving the nutrient intake of school going children.

Review of Literature

Shah *et al.*, (2003) observed the prevalence of stunting among children in rural Pakistan. A total of 483 (26%) of the 1878 children were wasted, 977 (55%) were stunted and 259 (15%) were both wasted and stunted. Mothers who were illiterate were more likely to have stunted children.

Socio-economic profile of 771 children (1-7 years) of Ghaziabad city was studied. Majority of children (60.5%) belonged to lower caste followed by other backward caste (20.8%), higher caste (15.2%) and rest

3.5 per cent were from Muslim community. Majority of fathers (54.5%) and 85.5 per cent of the mothers were either illiterate or just literature having no formal school education (Garget *et al.*, 2004).

Nutritional status of 200 rural school children (8-13 years) of Jarsa block of Allahabad district of Uttar Pradesh was studied. Fifty nine percent children were male and 41 per cent were female. Thirty two percent mothers were educated upto high school followed by postgraduate (28%), while 16 per cent mothers were illiterate (Surupriya and Mathew,2007).

Sati and Dahiya (2012) conducted a study in Hisar district of Haryana to assess the nutritional status of 200 rural school going children (7-9 years). The results of the study revealed that food and nutrient intake was inadequate and anthropometric measurements (mean height and weight) were significantly ($P < 0.05$) lower than reference value. Regarding prevalence of malnutrition, it was found that 54.11 percent of the children were stunted and 55.5 per cent were underweight.

Materials and Methods

The present study was conducted on school going children in the age group of 7-9 years. Total 200 rural school going children *i.e.* 100 boys and 100 girls were selected proportionately for the study from the Govt. Primary School of Lakhanmajra and Kahanaur villages of Rohtak district, Haryana, respectively. Socio-economic status of the children was assessed by a well structured interview schedule. Nutritional status of children was assessed by standards given by ICMR, 2010 (Indian Council of Medical Research) and found the effect of mothers education on children mean nutrient intake. The association of mother's education with children nutrient intake was done by Z-test.

Results and Discussion

Data on personal and socio economic profile of children revealed that majority of the respondents belonged to 8-9 years of age group and majority of mothers were educated up to matric. Education of mothers greatly influences the nutrient intake of school going children.

The children whose mothers were educated up to intermediate and above had higher intake of energy, protein, fat, calcium, iron, β -carotene, thiamine, riboflavin, niacin, vitamin C, folic acid and vitamin B₁₂. However, the differences were significant ($P \leq 0.05$) in intake of β -carotene. This may be due to the reason that the educated mothers were more conscious and aware of their children's requirement. The results were in agreement with the findings of Rimpi (2002), Divya Sethi (2012).

Table-1
Socio-economic status of school going children

Characteristics	Frequency	Percentage
Age		
7-8 years	86	43.00
8-9 years	114	57.00
Sex		
Boys	100	50.00
Girls	100	50.00
Mother's education		
Illiterate	30	15.00
Can read and write	76	38.00
Primary	38	19.00
Middle	34	17.00
High school	14	7.00
Graduate	8	4.00

Fig. 1. Mother's education

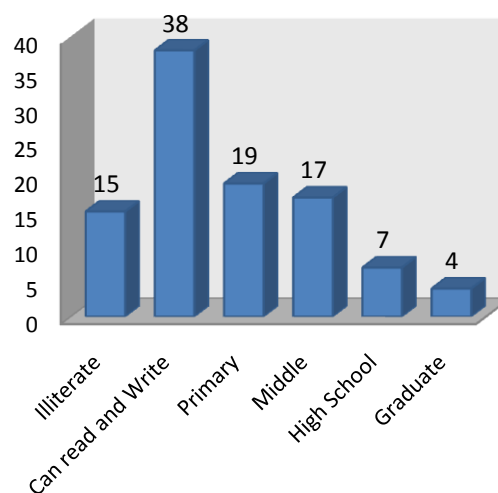


Table-2
Effect of Mother's Education on Mean Nutrient Intake of School Going Children

Nutrients	RDA	Mean daily food intake		
		Up to Primary (n=50)	Up to Matric (n=43)	Intermediate and above (n=7)
Energy (Kcal)	1690	1275.37±241.99 ^a	1284.67±265.34 ^a	1291.09±279.08 ^a
Protein (g)	29.5	21.07±5.12 ^a	22.53±5.76 ^a	23.96±5.91 ^a
Fat (g)	30	15.77±1.93 ^a	16.26±2.07 ^a	16.33±2.58 ^a
Calcium (mg)	600	351.42±55.57 ^a	361.56±59.61 ^a	364.38±62.30 ^a
Iron (mg)	16	9.68±3.15 ^a	10.76±3.70 ^a	11.81±4.36 ^a
β-carotene (µg)	4800	1185.98±378.03 ^a	1306.57±381.67 ^{ab}	1342.65±401.24 ^b
Thiamine (mg)	0.8	0.49±0.13 ^a	0.53±0.19 ^a	0.57±0.22 ^a
Riboflavin (mg)	1.0	0.31±0.15 ^a	0.37±0.18 ^a	0.40±0.19 ^a
Niacin (mg)	13.0	4.69±1.78 ^a	4.72±1.83 ^a	4.84±2.10 ^a
Vitamin C (mg)	40	20.93±8.54 ^a	21.57±8.83 ^a	22.90±9.07 ^a
Folic acid (µg)	120	72.88±31.24 ^a	80.56±37.83 ^a	81.79±38.91 ^a
Vitamin B ₁₂ (µg)	0.2-10	0.9±0.06 ^a	0.14±0.09 ^a	0.16±0.12 ^a

Conclusion

The present study was conducted to determine nutritional status of school going children (7-9 years). For this study, a total of two hundred school going children in the age group of 7-9 years i.e. 100 boys and 100 girls were drawn proportionately from the randomly selected two villages of Rohtak district. The intake of food nutrients was higher among the subjects whose mothers were educated up to intermediate and above. Hence, it may be concluded that the consumption of nutrients like energy, protein, fat, calcium, iron, β-carotene, thiamine, riboflavin, niacin, vitamin C, folic acid and vitamin B₁₂ were inadequate in the diet of school going children. But the children of mothers educated up to primary were not to be found to taking adequate amount of nutrients, due to many reasons like lack of education, time, insufficient food etc. Therefore, the problem of malnutrition and under nutrition pose a serious threat to growth and development along with poor academic performance, adverse effects on gross motor activities, skilled motor activities, perception, cognition, memory, attention span, language development and inter social relationship, in turn the personality of the children. So, Nutrition education also needs to be included in school curriculum as children are better able to retain nutrition knowledge gained at school level, when it is reinforced by favorable conditions in the home.

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