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Effect of mother's education on school going children: A scenario of rural Haryana

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Abstract
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. Nutrition plays a vital role as inadequate nutrition during childhood may lead to malnutrition. 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 role of mother has been considered very important in making children to consume the right amount of food of good quality at the right time. 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 food intake of school going children.

Keywords: nutrition, school going children, development

1. Introduction
School age is a time for acquisition of skills that permit independence in eating and development of food likes and dislikes. Nutrition plays a vital role as inadequate nutrition during childhood may lead to malnutrition. 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 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 role of mother has been considered very important in making children to consume the right amount of food of good quality at the right time. Several studies have been conducted on physical growth and nutritional status of children in different parts of the country as malnutrition continues to be a common, social and undoubtedly the biggest public health problem in our country today. Studies have shown that more than 50 percent of school children suffer from sub-clinical under nutrition because of poverty, ignorance, disturbed emotional status or inadequate diet. A number of diet and nutrition surveys have revealed that majority of school children consume inadequate food stuffs, especially protective foods such as pulses, leafy vegetables, milk and milk products lower than the recommended level. Along with inadequate dietary habits, non-availability of protective foods, low purchasing capacity, illiteracy and ignorance about the importance of nutrition during this period, unsanitary living conditions and prevalence of infectious diseases are some of the main causes of malnutrition. Physical and mental retardations contribute to high mortality among children. It has been reported by studies that the measurements of head circumference usually indicates that the brain size is less among malnourished children. Malnutrition reduces memory, hearing ability and impairs intellectual functioning. Optimal nutrition is necessary for physical and mental growth and development in children (Church and Katigblack, 1991 and Colombo *et al.*, 1992) [1, 2]. The prevalence of under nutrition tended to increase from about 63% among children in 6-9 year age group to 78% in 10-13 years and then declined to 66% in 14-17 year age group (NNMB Technical Report, 2002) [6].

2. Review of Literature
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 the backward caste (20.8%), higher caste (15.2%) and rest 3.5 per cent were from Muslim community. Majority of father's (54.5%) and 85.5 per cent of the mothers were either illiterate or just literate having no formal school education (Garget *et al.*, 2004) [4].
Nutritional status of 200 rural school children (8-13 years) of Jarsa block of Allahabad district of Uttar Pradesh was studied. Fifty nine per cent children were male and 41 per cent were female. Thirty two per cent mothers were educated up to high school followed by postgraduate (28%), while 16 per cent mothers were illiterate (Supriya and Mathew, 2007) [8].
Sati and Dahiya (2012) [9] 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 per cent of children were stunted and 55.5 per cent were underweight.

3. Methodology

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. 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 [5] (Indian Council of Medical Research) and found the effect of mother's education on children's mean food intake. The association of mother's education with children's food intake was done by Z-test.

4. Result and Discussion

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
Parental 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

Table 2: Effect of mother's education on mean food intake of school going children

Foodstuffs (g)	RDA (g)	Mean daily food intake		
		Up to Primary (n=50)	Up to Matric (n=43)	Intermediate and above (n=7)
Cereals	180	175.87±23.36 [a]	176.52±25.81 [a]	177.86±25.89 [a]
Pulses	60	38.58±20.73 [a]	39.98±19.17 [a]	40.72±18.43 [a]
Milk and Milk Products	500	152.41±44.16 [a]	153.25±45.63 [a]	155.14±46.12 [a]
Roots and Tubers	100	52.23±23.14 [a]	53.01±22.66 [b]	55.26±21.74 [ab]
Green Leafy Vegetables	100	34.98±32.41 [a]	34.49±32.63 [a]	36.13±29.17 [a]
Other Vegetables	100	39.19±23.71 [a]	39.84±23.54 [a]	40.49±22.81 [a]
Fruits	100	38.21±23.94 [a]	38.64±23.12 [a]	39.10±22.90 [a]
Sugar & Jaggery	20	16.51±3.19 [a]	16.46±3.27 [a]	17.01±2.98 [a]
Fats & Oils	30	13.63±2.54 [a]	13.95±2.61 [a]	14.87±4.24 [a]

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 food intake of school going children. Data in Table -2 depicted that the children of intermediate and above level educated mothers were consuming significantly (P≤0.05) higher amounts of cereals, pulses, fats and oils, sugar and jaggery, milk and milk products, green leafy vegetables and fruits. This may be due to the reason that mothers become more conscious and aware about importance of protective foods in the diet of their children with rise in their educational status. Intake of other food stuffs like roots and tubers and other vegetables were found to be higher in children of mothers who were educated up to matric. There were significant (P≤0.05) differences in intake of roots and tubers. The results were in agreement with the findings of Rimpi (2002) [7], Divya Sethi (2012) [3].

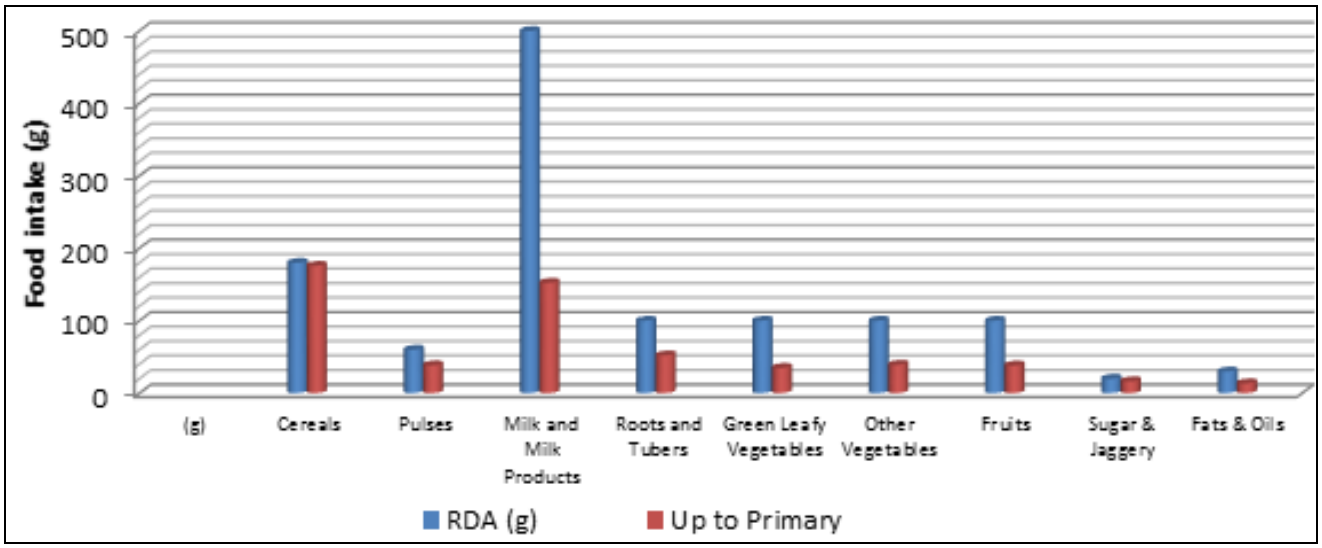

Fig 1: Effect of mother's education on mean food intake of school going children

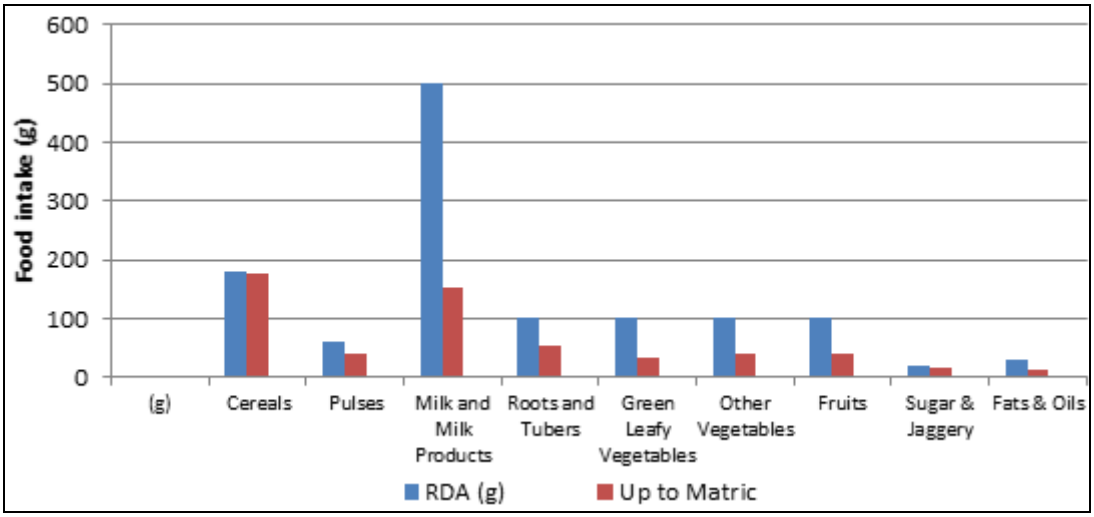

Fig 2: Effect of mother's education on mean food intake of school going children

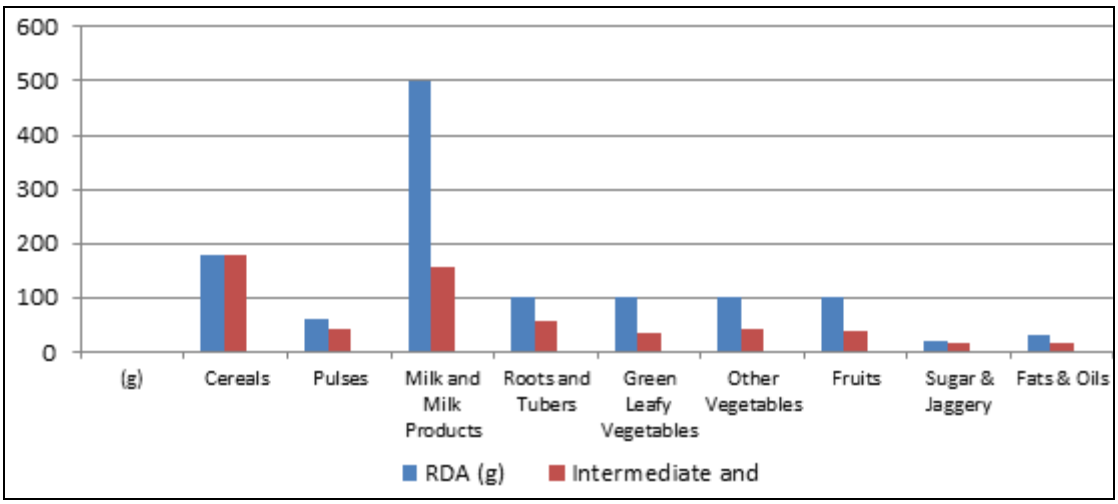

Fig 3: Effect of mother's education on mean food intake of school going children

5. 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 stuffs was higher among the subjects whose mothers were educated up to intermediate and above. Hence, it may be concluded that the consumption of foods like pulses, fruits, roots and tubers, other vegetables, green leafy vegetables, milk and milk products and fats and oils 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 food, 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. It can be reduced by increasing awareness in mother's regarding the food intake of child. So, there is a need to impart nutrition education to mothers about importance of balanced diet in their child's daily intake.

6. References

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