# Nutritional assessment and life style of primary school children in Ramabai Nagar

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## ABSTRACT

Nutrition support to primary education is considered as a means to achieve the objective of providing free and compulsory universal primary education of satisfactory quality to all the children below the age of 14 years by giving a boost to universalization of primary education through increased enrolment, improved school attendance and promoting nutritional status of primary school children simultaneously. The aim of the present study was the assessment of nutritional status and life style of primary school children. For this purpose, 150 samples were randomly selected from Ramabai Nagar. The children's nutritional status was not good because of lower consumption of energy, protein, fat, iron, calcium and vitamins. The consumption of food nutrients was lower than recommended dietary allowances.

**KEY WORDS :** Nutritional assessment, Life style, Primary school children.

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Primary school is a dynamic period of physical growth and mental development of the child. Research indicates that nutritional deficiencies and poor health in primary school age children are among the causes of low school enrolment, high absenteeism, early dropout and poor classroom performance. The present position with regards to the nutritional status and life style of the children in our country is very unsatisfactory. Apart from mid day meal programme which is run by the Government of India in government run schools, there are no other efforts for children in age group 6-14 years.

## Objectives:

To study the nutritional status and life style of primary school children in Ramabai Nagar.

## RESEARCH METHODS

The present study was carried out from January 2011 to June 2011 in Ramabai Nagar. The study subjects were school going children (9-12 years). For the purpose of study, three blocks Rajpur, Sandalpur and Amraudha were selected from Ramabai Nagar. From these 3 blocks, 9 villages, Rajpur, Pailawar, Jainpur, Sandalpur, Jaganathpur, Rewa, Shahjahanpur, Rurgaon and Bhognipur were selected. One Primary School from each village was randomly selected. 150 school going children were taken for this study. They were interviewed through questionnaire method and desired information was collected on pre-designed and pre-tested proforma. After collection, the whole data were compiled, analyzed and appropriate statistical tests were applied. The nutritional status was assessed by 24 hour recall method and comparing the nutritive value of food group by Recommended Dietary Allowances (RDA), such as percentage and deficient per cent formula used:

$$Percentage = \frac{The\ sum\ of\ all\ the\ respondents}{Total\ number\ of\ all\ the\ respondents} \times 100$$

### Deficient per cent:

Deficient per cent= (Differences/Standard) x 100
Difference= Standard – Average
Deficient per cent= {RDA- nutrient(average) x 100}/RDA

## RESEARCH FINDINGS AND DISCUSSION

Table 1 indicates the distribution of children according to their life style. 42 per cent children wake up early in the morning while 58 per cent not wake up early in the morning. 35 per cent children did any additional activities mostly girls such as sweeping, mopping, cleaning utensils with mother, making cow-dung cakes etc whereas 65 per cent children were not interested in doing any type of additional activity. Only 11 per cent children were interested in studying early in the morning whereas 89 per cent children's were not interested in studying early in the morning. 28 per cent children, boys do field work with their father while 72 per cent children were not interested in doing any field work. 90 per cent children were interested in taking breakfast and only 10 per cent

were not interested in taking breakfast. Total 100 per cent children were taking mid day meal with interest. 86 per cent children used go their school timely while 14 per cent were not interested in going school timely. 87 per cent children liked their school whereas 13 per cent children did not like their school. All 100 per cent children liked their school dress.

Table 2 shows that 92 per cent children cleaned their teeth daily while 8 per cent were not aware of cleaning the teeth daily. 57 per cent children were taking bath daily but 43 percent children were not interested in taking bath daily. Only 12 per cent used to wash their cloths themselves whereas 88 per cent children were not washing their cloths themselves. 6 per cent children ironed their cloths/ school dress while 94 per cent children were not interested in ironing. 17 per cent children polished their shoes whereas 83 per cent children were not interested in polishing shoes. 45 per cent children cut their nails regularly while 55 per cent children were having long and dirty nails. Maximum (99 per cent) children combed their hairs regularly whereas 1 per cent children were not interested in combing hairs. 72 per cent children cut their hairs regularly but 28 per cent mostly girls were not interested in cutting hairs. From all children's only 21 per

cent children washed their hands before taking food and no one from all children was clean their teeth after taking food.

The information collected in Table 3 represents the nutrient intake of the children, shows health status of the children and identify the malnourished children or healthy children. According to Nutritive value of Indian Food by C.Gopalan (2007). The RDA value is compared with intake by children and found in the nutrients.

Energy value of RDA compared with intake by children which was found 19.36 per cent deficiency in male children whereas 10.35 per cent deficiency in females. The intake of protein in male children was 25.92 per cent deficient and 29.82 per cent in female children. In fat compared with RDA 13.63 per cent deficiency was found in male children whereas 18.18 per cent deficiency was found in female children. In iron consumption, 41.17 per cent deficiency was in male children and 21.05 per cent in female children. When calcium intake of children compared with RDA, 41.66 per cent deficiency was in both male and female children. Vitamin A consumption compared with RDA, 50 per cent deficiency was found in male and female children. In vitamin C, 15.27 per cent deficiency was in male children while 24.30 per cent

| Table 1: Distribution of children according to their life style | | | | (n=150) |
|---|---|---|---|---|
| Life style early in the morning | Yes | | No | |
| | Frequency | Per cent | Frequency | Per cent |
| Wake up | 63 | 42 | 87 | 58 |
| Additional activity | 52 | 35 | 98 | 65 |
| Study | 17 | 11 | 133 | 89 |
| Field work | 42 | 28 | 108 | 72 |
| Breakfast | 134 | 90 | 16 | 10 |
| Mid day meal | 150 | 100 | 0 | 0 |
| School timely | 130 | 86 | 20 | 14 |
| Schooling | 131 | 87 | 19 | 13 |
| School dress | 150 | 100 | 0 | 0 |

| Table 2: Distribution of children according to hygiene and sanitation | | | | |
|---|---|---|---|---|
| Hygiene and sanitation | Yes | | No | |
| | Frequency | Per cent | Frequency | Per cent |
| Clean teeth daily | 138 | 92 | 12 | 8 |
| Bathing daily | 86 | 57 | 64 | 43 |
| Washing cloths | 18 | 12 | 132 | 88 |
| Ironing cloths/school dress | 9 | 6 | 141 | 94 |
| Polishing shoes | 25 | 17 | 125 | 83 |
| Cutting nails regularly | 67 | 45 | 83 | 55 |
| Combing hairs regularly | 148 | 99 | 2 | 1 |
| Cutting hairs regularly | 108 | 72 | 42 | 28 |
| Wash hands before taking food | 31 | 21 | 119 | 79 |
| Clean teeth after taking food | 0 | 0 | 150 | 100 |

deficiency was noticed in female children. The value of thiamin, compared with RDA was found 25.45 per cent deficiency in male children and 32 per cent deficiency in female children. In comparison of riboflavin with RDA, 24.61 per cent deficiency was in male children and 28.33 per cent deficiency in female children.

To achieve the goal, the major factors affecting the primary school children were studied in terms of dietary, anthropometric, clinical examination, life style, hygiene and sanitation of the respondents and result obtained has been summarized in following way:-

On the basis of distribution of children according to sex. The male children were 61 per cent whereas 39 per cent female children. 51 per cent families were nuclear and 39 per cent female were joint family. On the basis of number of family members maximum 46 percent families were having 8-12 family members and only 19 per cent families having up to 4 family members. According to religion 55 per cent were Hindu while 45 per cent were Muslim. On the basis of education of children's father and mother most of the parents were illiterate and less educated. The occupation of father and mother include farmer (labour in farms), service, business and labour and most of the children's mother was housewife. According to total family income, maximum 43 per cent children's family incomes were 4000-5000. Maximum, 25 and 13 per cent male and female children having weight between 20-25 kg. were also low. On the basis of eye symptoms mostly children were having normal eyes 53 per cent while 32 per cent were having itching, 11 per cent were having water discharge and 5 per cent were having weak eye-sight. We found that 44 and 19 per cent children's were having cracked and cheilosis in lips whereas 37 percent were having normal lips. In the assessment of hairs mostly children were having rough and loss of lustre in hairs. In teeth assessment 42 per cent children were having dirty teeth 11 and 8 per cent children were having

caries and dental cavity respectively and 39 per cent children were found normal teeth. In assessment of gums 89 per cent children were having normal gums whereas 11 per cent were having bad smell. The tongue assessment 51 per cent were having white tongue while 20 and 5 per cent were having pale and red tongue. 24 percent were having normal tongue. In assessment of appearance of face, 41 per cent children were having moon face and 17 and 32 per cent were having pale and dry face and only 10 percent were having normal face. In skin assessment we found that 68 per cent children were having normal skin whereas 32 per cent children were having dry skin. In nails appearance, 54, 21 and 16 per cent children were having shine less, pale, brittle nails while only 9 per cent were having normal nails. In assessment of appetite 45 per cent children were having normal appetite. 28 per cent children were having mild appetite, 16 per cent were having severe appetite and 11 per cent children were taking food according to their mood. On the basis of distribution of children according to their life style. 42 per cent children wake up early in the morning while 58 per cent were not wake up early in the morning. 35 per cent children do any additional activities mostly girls such as sweeping, mopping, cleaning utensils with mother, making cow-dung cakes etc whereas 65 per cent children were not interested in doing any type of additional activity. Only 11 per cent children were interested in studying early in the morning whereas 89 per cent children's were not interested in studying early in the morning. 14 per cent children, boys do field work with their father while 86 per cent children were not interested in doing any field work. 90 per cent children were interested in taking breakfast and only 10 per cent were not interested in taking breakfast. Total 100 per cent children taking mid day meal with interest. 86 per cent children go their school timely while 14 per cent were not interested in going school timely. 87 per cent children like their school whereas 13

| Table 3: Intake of nutrients as compared with recommended dietary allowances | | | | | | |
|---|---|---|---|---|---|---|
| Nutrient | Male | | | Female | | |
| | RDA | Observed | Deficient (%) | RDA | Observed | Deficient (%) |
| Energy (Kcal) | 2190 | 1766 | -19.36 | 1970 | 1766 | -10.35 |
| Protein (gm) | 54 | 40 | -25.92 | 57 | 40 | -29.82 |
| Fat (gm) | 22 | 19 | -13.63 | 22 | 18 | -18.18 |
| Iron (mg) | 34 | 20 | -41.17 | 19 | 15 | -21.05 |
| Calcium (mg) | 600 | 350 | -41.66 | 600 | 350 | -41.66 |
| Vitamin A (mcg) | 600 | 300 | -50 | 600 | 300 | -50 |
| Vitamin C | 40 | 33.89 | -15.27 | 40 | 30.28 | -24.30 |
| Thiamin | 1.1 | 0.82 | -25.45 | 1.0 | 0.68 | -32 |
| Riboflavin | 1.3 | 0.98 | -24.61 | 1.2 | 0.86 | -28.33 |

Source: Gopalan *et al.* (2007)

per cent children were not like their school. All 100 per cent children like their school dress.

The maximum 59 per cent children wear bathroom sleepers in their school while 17 and 24 per cent children wear shoes and sandel in school, respectively. The maximum children were having 1 set of uniform.

On the basis of distribution of children according to hygiene and sanitation maximum children were clean their teeth, bathing and combing daily. Most of the children were not interested in washing their cloths, ironing, polishing shoes, cutting nails regularly, wash hands before taking food and clean teeth after taking food. On the basis of additional food habits maximum 46 per cent children were not interested in taking additional food items. 28, 16 and 10 per cent children were taking fruits, puffed cereals and popcorns, respectively. From the preference of sweet items most of the children prefer sweet items sometimes. 50 per cent children drink three glass water per day while 33 and 17 per cent drink four glasses and five glass water per day. In 24 hour recall method found in the nutrient intake of children. 19.36 per cent deficient in energy intake in males and 10.35 per cent in females. In assessment of protein intake we found that 25.92 per cent in male children and 29.82 in female children. 13.63 and 18.18 per cent fat deficient in male and female children, respectively. In iron assessment 41.17 per cent found in male children and 21.05 per cent found in female children. The value of calcium found 41.66 per cent deficient in male and female children. In vitamin-A assessment 50 per cent deficient in both male and female. In vitamin-C value 33.89 per cent deficient in male children and 24.30 per cent in female children. From the survey, the value of riboflavin found that 24.61 per cent deficient in male children and 28.33 per cent in female children.

## Conclusion:

On the basis of result it may be concluded that the nutritional status of primary school children was not good because of low intake of nutrient rich foods sources.

Poverty, low education of parents and lack of knowledge about nutrition caused poor nutritional status of primary school children.

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