ABSTRACT
NUTRITIONAL PROFILE AND IMPACT OF NUTRITION COUNSELING ON THE NUTRITION KNOWLEDGE, MENTAL CAPACITIES AND PHYSICAL ACTIVITY LEVEL OF SELECTED SCHOOL GOING CHILDREN OF KOCHI
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Background
This study was undertaken to assess the nutritional status and to find out the impact of nutrition counseling on the nutrition knowledge, mental capacities and physical activity level of the selected school going children of Kochi. School going children go through remarkable physical changes of all kinds; their food intake becomes a critical aspect for the growth and development. During their growing period, care should be taken to include all the nutrients in their diet. A balanced diet is required for the overall development of the school child.

Methodology
A total of 1058 children were selected by cluster sampling method, Out of them 265 boys and 251 girls were from rural area and 304 boys and 238 girls from urban area who participated in the study. Urban and rural children in the age group of 10 – 12 years who had regular attendance in school were studied. General information, socioeconomic status, 24 hour dietary recall method was collected by interview method. Nutrient intake was calculated and compared with the recommended dietary allowances. All the children were tested for nutrition knowledge, mental capacity and physical activity with the pre tested questionnaire. Nutrition counseling was given to the children and their mothers using power point presentations, food festivals and audio visual aids for three months and the same questionnaire was used for post testing to find out the impact of the counseling on both the children and mothers.

Results
Of the total no of 1058 school children who participated in the study, boys outnumbered the girls in the urban area while it was the reverse in the rural area. Both in the rural and urban area there was a greater percentage of Christians, Hindus and Muslims were the other major religions. 66.9% of the children were from the nuclear families and 33.1 % from the joint families. The school children were either non-vegetarian, vegetarian and lacto ova vegetarians. The nutrient intake revealed that the diet was lacking in all the major nutrients and meal skipping and irregular time schedule were noticed.

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The caloric intake ranged between 1389.33kcal to 1644.84kcal/day, the protein intake was 36.31gm to 39.72gm per day, calcium 277.32 mg to 529.52 mg per day, iron intake was 11.49mg to 14.81mg per day in both urban and rural areas which was far below the ICMR 2010 recommendations of dietary allowances of Indians. This will result in nutritional deficiency and growth so it is absolute necessary to educate the children as well as the mothers who cook the food for the family is inevitable among the school going children and to promote healthy eating habits.

10.7% of the school children from the rural area were severely underweight (3rd percentile or -3 SD), and 51 (9.4%) were obese from urban area (97th percentile or +3 SD) 322 (62.4%) were underweight (15th percentile or – 2 SD) from the rural area while 93 (17.15%) were overweight among the urban area (85th percentile or +2 SD). Also 143 (26.38%) from urban area (50th percentile) and 100 (19.4%) from rural area were normal.

The results of mental capacities indicate a greater percentage (72.11%) of the selected children were in grade 3 in the pre counseling session while in post counseling there were only (39.89%). It is also important to note that none of the children were in grade 1 in the pre counseling session while (38.47%) of the children were in this grade in the post counseling session. Likewise the number of children (9.27%) who were in grade 4 in the pre counseling session improved after counseling. Two percent of the selected children were in grade 5 in the pre counseling session, while none were in grade 5 after counseling.

The results of the pre and post counseling score on the physical activity level show a large number of the 794 children who were graded as low physical activity before counseling got directly upgraded to high physical activity level after counseling. Two hundred and four children were in medium physical activity level before counseling while after counseling the frequency rose to 479 as the children from low physical activity level also got upgraded. There were only 60 children in the category of high physical activity before counseling, and the number rose to 579.

The results of KAP study on the mothers also showed significant improvement on account of nutrition counseling.

**Conclusion**

The dramatic improvement observed in the study is due to the interaction that occurred between the children and researcher. The study also showed that only a relatively short period of counseling (3 months) with excellent audio – visual aids helped to increase the children’s nutrition knowledge and ability to understand the nutrition aspects. The results also suggest that nutrition counseling will help to facilitate the consumption of healthy locally available foods and limiting the consumption of junk foods. The students’ academic success is strongly related to their health as it has a direct being on their school attendance, performance in tests/ exams and their ability to be attentive in class. Such counseling will help in the long run to bring forth productive healthy citizens of our country.