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EFFECT OF NUTRITIONAL EDUCATION PROGRAM (ONE SESSION) FOR PARENTS OF PRE-SCHOOL CHILDREN BETWEEN 3-6 YEARS OF AGE

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ABSTRACT

In India we believe imparting good values and habits from very early age. Many carry forward these values and habits throughout their life and impart the same to future generations. The responsibility of imparting these values and habits are of parents and guardians of our society. The present study investigated nutritional knowledge of parents of pre-school and dietary pattern of pre-school children. 502 parents of pre-school were given one session of Nutritional Education Program, their knowledge and dietary practices of children were evaluated before and after Nutritional Education Program. Dietary intake of the pre-school children was analyzed using 24-hour recall and food frequency questionnaire filled by the parents. Many lacked in meeting daily Indian Recommended Dietary Allowance standards. After Nutritional Education Program there was a significant increase in nutritional knowledge of parents of Pre-School. Though no significant difference were observed in dietary intake of Pre-School children after Nutritional Educational Educational Educational Educational Education Program.

KEY WORDS

Pre-school children, Parents and Nutritional Education Program (NEP).

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INTRODUCTION

Parents shape their children's eating patterns with the foods they make and provide, and in the way they interact with children at meals. Hence, it was essential to increase parental awareness of unhealthy eating patterns and instill corrective nutritional knowledge in parents as per Birch and Davision, 2001. The impact of a nutrition education program was studied in 2003 by Walsh *et al*, where local nutrition advisors, on knowledge of nutrition and dietary practices were used. They concluded that a community-based nutrition education program can contribute to knowledge of balanced, economical nutrition and dietary practices in low-income communities. According to Huges et al., 2005 without parental guidelines, children were likely to be attracted to high salt and high sugar foods, rather than to a more balanced diet including vegetables. In a study, parents were found to be the principle regulators of children's eating and the home environment was most influential on children's consumption behaviors, as per Campbell et al., 2006. The study also stated that, parent's beliefs, attitudes, mother's nutrition knowledge, TV advertising, feeding styles, peer pressure and parent modelling were influencing factors on children's consumption behaviour. The present study analyzed nutritional knowledge of parents and dietary Practice of preschool children, followed by one session of a Nutritional Education Program (NEP). After 2 months of NEP, nutritional knowledge of parents and dietary practice of pre-school children were again analyzed. The objective of the study was to evaluate the nutritional knowledge of parents before and after NEP using a questionnaire and to assess dietary practice of pre-school children before and after NEP. The aim was to provide NEP to parents of pre-school children to obtain a healthy dietary pattern among the children. Dietary intake of the preschool children was analyzed as per the 24-hour recall and food frequency questionnaire filled by the parents. Many pre-school children lacked in meeting daily Indian Recommended Allowance standards. After 2 months the Nutritional Education Program there was a significant increase in nutritional knowledge of parents of Pre-School. No significant difference was observed in dietary intake of pre-Nutritional Educational school children after Program. The impact of nutrition education program was studied by Kauret al, 2011 in a study which was conducted on medical girl students to improve iron status. The study concluded that nutrition education was one of the appropriate, effective and sustainable approaches.

MATERIALS AND METHODS

Target group: The target group of the study was preschool children and their respective parents. About 700 students and their respective parents were taken as target group.

Sample size: 502 pre-school children and their respective parents were selected for the study.

Age group: Pre-school children of 3-6 years were selected for the study.

Inclusion criteria: Pre-school children of 3-6 years both boys and girls were selected for the study.

Exclusion criteria: Children with severe disease condition such as infections, diarrhea, and inborn error disease or if they are on any medication were excluded.

A questionnaire was used to access the nutritional knowledge of parents of pre-school children before and after NEP.

Food Frequency Ouestionnaire (FFO)

The food frequency questionnaire is a review of intake frequency i.e. food consumed per day, per week, or per month. Advantages of FFQ are it can be easily standardized, it provides overall picture of intake. Disadvantages of FFQ are it requires literacy skills, it requires knowledge of portion size, Krause, 2011.

24-hour recall

The 24-hour recall method of data collection requires individuals to remember the specific foods and amounts of food they consumed in the past 24 hours, Krause, 2011.Advantages are it's a very quick process and is easy to conduct. Disadvantages are it relies on respondent's memory and it requires knowledge of portion size, Krause, 2011.

Parents of the pre-school children were given the questionnaire to assess their nutrition knowledge. Food frequency questionnaire and a 24-hour recall were given to them to be filled on behalf of their respective children. Following that one session of nutritional education program (NEP) was conducted for the parents, to enhance the dietary pattern of their children. After a period of 2 months, parents filled the nutritional knowledge questionnaire, food frequency questionnaire and 24-hour recall again. The data collected, was used to analyze the effect of nutritional education program on the nutritional knowledge of the parents of preschool children and the dietary pattern of pre-school children.

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RESULTS AND DISCUSSION

An increase in the Knowledge score of parents of pre-school children was observed after the NEP was given as shown in the Figure No.1. It was found that before NEP, knowledge score of parents of pre-school children were (8.05 ± 1.9) which was observed to increase successfully after NEP. But no significant increase was observed in the dietary practice score of preschool children after NEP. Results showed that Pre-NEP dietary practice score was (9.15 ± 1.8) and Post-NEP was (9.75 ± 1.5) respectively.

A similar study was conducted on children by Townsend *et al.* 2006, where effect of nutrition education program was evaluated. 5,111 children were given NEP and a significant gain was observed in the knowledge of subjects (P<0.008).

Figure No.2, depicts the minimal difference in mean energy (kcal) intake of the subjects when compared in the Pre and Post NEP. In the Pre-NEP mean energy intake was found to be (817.5 ± 50.06) , whereas Post-NEP mean energy intake was (815.2 ± 49.8) . Similar results were also noted in the mean carbohydrate, protein and fat (gm) intake. Mean carbohydrate (gm) intake of subjects before NEP was (144.3 ± 11.1) and after NEP was found to be (144.3 ± 10.9) among the subjects. Further in the Figure No.3, it was observed that there was no significant difference in protein and fat intake of the subjects before and after NEP.

Figure No.4, illustrated that the energy intake Pre and Post NEP of all the subjects, both male and female

was inadequate when compared to ICMR RDA standards (Table No.1).

Adequacy of male and female protein intake was compared in Figure No.5. It was observed that only 23.9% of male and 24.3% of female had adequate protein intake per day as observed before NEP. Highest percent of male and female i.e. 76.1% and 75.7% respectively were observed with inadequate intake of protein per day when compared with ICMR RDA standards. Data showed that after NEP only 24.3% male and 24.7% female were found to consume adequate protein per day as compared to ICMR RDA standards. It was further observed that maximum percent of male and female subjects consumed inadequate protein as compared to ICMR RDA standards. Also minimal difference was seen in adequacy of protein intake after the NEP was given to the subjects' parents.

Kulsum*et al.* 2008 conducted a study on food intake and energy protein adequacy of children. They found that only 22% of children consumed diet adequate in protein and calories. They also concluded that, protein calorie adequacy is influenced by age, gender of children and significantly by literacy and economic status of mothers.

Figure No.6, illustrated that the fat intake Pre and Post NEP of all the subjects, both male and female was inadequate when compared to ICMR RDA standards.

S.No	Years	Energy (kcal/day)	Protein (grams/day)	Fat (grams/day)
1	1-3years	1060	16.7	27
2	4-6years	1350	20.1	25

Table No.1: Indian Council of Medical Research (ICMR) Recommended Dietary Allowance (RDA) 2010



Nandita S Dhanaki and Rupali Sengupta. / International Journal of Nutrition and Agriculture Research. 1(2), 2014, 99 - 104.

Figure No.1: Comparison of Knowledge and Practice Pre-Post NEP



Figure No.2: Comparison of Energy intake Pre-Post



Figure No.3: Comparison of Nutrient intake Pre-Post

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Nandita S Dhanaki and Rupali Sengupta. / International Journal of Nutrition and Agriculture Research. 1(2), 2014, 99 - 104.



Figure No.4: Comparison of Energy Adequacy with ICMR RDA,



Figure No.5: Comparison of Protein Adequacy with ICMR RDA



Figure No.6: Comparison of Fat Adequacy with ICMR RDA

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CONCLUSION

The study aimed at imparting nutritional knowledge to parents of pre-school children, so they can instill healthy dietary habits among their children from very young age as well as enhance the children's growth and development. During the interaction with parents, many misconceptions came into view about nutrition, which were accordingly clarified e.g. many believed that fruits like apple, banana are good source of protein or DHA (Docosahexanoic Acid) and EPA (Eicosapentanoic Acid) are present only in health drinks because advertisements claims it. Dietary sources of essential nutrients were made known to them, so it can be included into children's daily diet from an early age and prevent deficiency. The study improved the nutritional knowledge of the parents, but dietary pattern of the children showed no significant difference. The present study was an initial approach to integrate parents' role in nutrition of their children as well as towards the community nutrition.

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