

Impact of Nutrition Education on Nutritional Knowledge of Care-Givers of Preschool Children of Jorhat, Assam

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Abstract

The present study has been conducted to impart nutrition education to the care-givers of children (4-6 Years) of Jorhat, Assam. Nutrition education was imparted to the care-givers of the target children with the help of suitable teaching aids on aspects related to basic five food groups, nutritional deficiency disorders in order to improve the nutritional knowledge of the respondents. Prior to imparting nutrition education, the nutritional knowledge of the respondents was assessed by administering a knowledge scale. The pre-exposure knowledge level of the respondents revealed that 42.5 per cent of the respondents had low level of knowledge regarding nutritional aspects of basic five food groups whereas 45 per cent had very low knowledge regarding nutritional deficiency disorders. The difference between mean pre-exposure knowledge scores and mean post exposure knowledge scores of the respondents were significant regarding all aspects, which indicated a significant gain in knowledge ($p < 0.05$). The results indicated that the nutrition education imparted to the care-givers of the target children had an impact in terms of gain in knowledge which is a reflection of successful implementation of the nutrition education intervention aimed at inculcating good nutritional care and practices to the care-givers for all round development of the pre-school children.

Keywords: Nutrition Education; Pre-Exposure; Post-Exposure.

Introduction

Nutrition Education is any combination of educational strategies, accompanied by environmental supports, designed to facilitate voluntary adoption of food choices and other food and nutrition-related behaviours conducive to health and well-being (Jones *et al.*, 2007). The main goal of nutrition education is to encourage the community to opt for healthy foods and healthy life style rather than unhealthy ones which may lead to various health disorders and non-communicable diseases. Nutrition education is required at each and every step of life, yet proper knowledge of nutritional facts behind food

is of utmost importance to the care-givers at home i.e. the mothers for appropriate nutritional care of the vulnerable groups per se i.e. the pre-schoolers. A child's informal nutrition education starts from the very beginning from the home itself. Parents and especially the mother are responsible for developing in the growing child proper eating habits and desirable attitude towards nutrition. Imparting nutrition education to the mothers helps to improve the dietary status of the family as mother's concept about balanced diet and how to provide it, can be changed. With the improvement in nutritional knowledge of the mothers, nutritional status of children also improves (Sharma *et al.*, 2005). Therefore, the present study has been carried out to impart nutrition education to the mothers or care-givers of the 4-6 years children of Jorhat, Assam.

Materials and Methods

In the present investigation, an attempt has been made to impart nutrition education to the care-givers of 4-6 years boys and girls. The purpose behind nutrition education intervention to the care-takers i.e.

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the mothers/ parents and school teachers is to impart appropriate nutrition information on inclusion of food from basic five food groups, selection of foods, making food choices which are nutritious. Proper nutrition information on balanced meal for pre-school or 4-6 years children and as their foods likes and dislikes governs their meal pattern, food habits which will eventually contribute to this age groups growth and development and academic pursuits. For the study, a three point knowledge scale was adopted and modified as followed by Saho (1997) for the study which consisted of statements that mainly dealt with knowledge of the respondents regarding basic five food groups and nutritional deficiency disorders. The statements were then put into three point response categories namely 'correct', 'incorrect' and 'do not know', with the scores 2,1 and 0 respectively.

Prior to nutrition education, the prepared knowledge scale was administered on the care-givers of the target children to assess the nutritional knowledge of the respondents regarding aspects of five food groups and nutritional deficiency disorders. After assessing the nutritional knowledge, nutrition education was imparted to the care-givers' in the respective schools with prior permission from the head of the institution. The care-givers' were divided into group of 50 members and nutrition education was given separately to each group. To be effective, nutrition education must be in local language, keeping this in mind the whole nutrition education programme was conducted in Assamese language. Nutrition education was imparted using suitable visual aids like power point presentation, recipe booklet were used in combination with lecture, live demonstration on preparation of nutritious snacks for preschool children and discussion method (Plate 1-4). Finally, the same knowledge scale was administered to assess the gain in knowledge of the care-givers after the nutrition education intervention after a interval of 7 days.



Plate 1: Imparting nutrition education to the care - givers (mothers)



Plate 2: Imparting nutrition education to the care - givers (mothers)



Plate 3: Recipe demonstration



Plate 4: Distributing booklet to the care-givers(mothers)

Results and Discussions

The present study was undertaken to impart nutrition education to care-givers of 4-6 years children. The nutritional knowledge of the care-givers was assessed before and after imparting nutrition education. The results obtained in the present investigation are presented and discussed under suitable headings.

Level of Existing Knowledge of the Respondents

The existing knowledge of the mothers regarding basic five food groups and nutritional deficiency disorders were assessed by administering a knowledge scale and the results are presented below.

Existing knowledge level of the respondents regarding basic five food groups

The existing knowledge of the respondents regarding basic five food groups were assessed by administering a knowledge scale on what are basic five food groups, importance of basic five food groups in the daily diet, sources of each food group and nutrients present in them. The existing knowledge level of the mothers regarding basic five food groups is depicted in Figure 1.

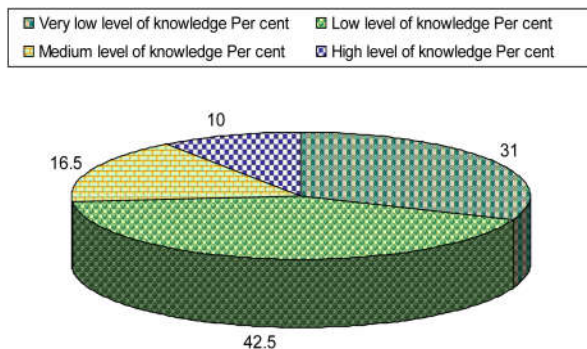


Fig. 1: Per cent distribution of respondents according to their existing knowledge on basic five food groups Respondents (N=200)

Figure 1 reveals that 31 per cent of the mothers had very low level of knowledge, followed by 42.5 per cent who had low level of knowledge, while 16.5 per cent of them had medium level of knowledge and 10 per cent had high level of knowledge. Study done by Bharali (2000) in four villages of Jorhat district stated that majority of the rural women had medium level of existing knowledge on nutrition. Borbora (2002) assessed the nutritional knowledge of the adult population of Jorhat, Assam and found that majority of the respondents had low level of knowledge regarding general nutrition.

Existing Knowledge Level of the Respondents Regarding Nutritional Deficiency Disorders

The existing knowledge of the respondents regarding nutritional deficiency disorders were assessed by administering a knowledge scale on different deficiency disorders such as PEM, vitamin A deficiency, anemia and IDD, their causes and symptoms. The existing knowledge level of the

mothers regarding nutritional deficiency disorders is depicted in Figure 2.

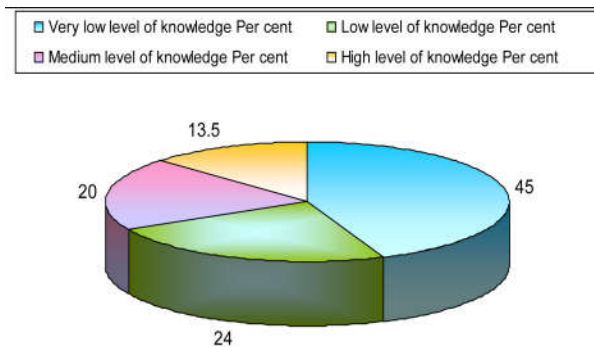


Fig. 2: Per cent distribution of respondents according to their existing knowledge on nutritional deficiency disorders Respondents (N=200)

Figure 2 indicates that 45 per cent of the mothers had very low level of knowledge followed by 24 per cent of the care-givers who had low level of knowledge while 20 per cent medium level and 13.5 per cent of them had high level of knowledge. Mohini (2005) in a study conducted at Dommasandra Primary Health Center in Bangalore reported that 40 per cent of the mothers had knowledge about the signs and symptoms of vitamin A deficiency. Momin (2008) reported that majority of the adult Garo women of West Garo Hills district; Meghalaya had low level of knowledge regarding sources of nutrients and its importance.

Overall Existing Knowledge Level of Respondents

Overall existing knowledge level of the respondents is depicted in Figure 3.

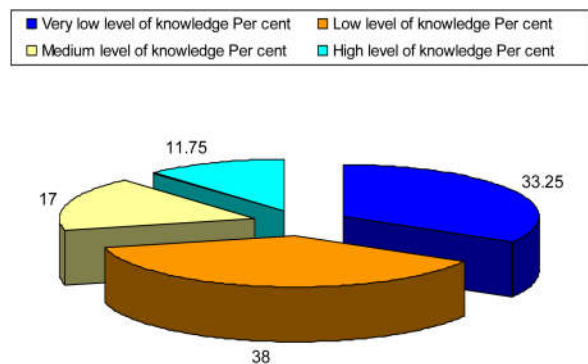


Fig. 3: Per cent distribution of respondents according to overall existing knowledge level Respondents (N=200)

Figure 3 indicates that 33.25 per cent of the mothers had very low level of knowledge, 38 had low level of knowledge followed by 17 had medium level of knowledge and 11.75 had high level of knowledge. The results indicate that majority (38 per cent) of the

care-givers had very low level of overall existing knowledge and very few per cent (11.75 per cent) had high level of knowledge. Therefore, the results of this study strengthen the need for proper nutrition education to improve their knowledge level regarding basic five food groups and nutritional deficiency disorders.

Mean Pre-Exposure (Existing) Knowledge Scores of the Respondents

In order to observe the impact of nutrition education on the respondents, knowledge scores on all aspects and overall knowledge of the respondents were subjected to mean score analysis prior to nutrition education exposure and the results are presented in Table 1.

The Table 1 shows the mean pre-exposure (existing) knowledge scores of the respondents on the given aspects.

It is evident from the Table 1 that the mean pre-exposure (existing) knowledge scores of the respondents on basic five food group was 5.51 and the mean pre-exposure (existing) knowledge scores of respondents regarding nutritional deficiency disorders was 2.84. The overall mean pre-exposure knowledge scores of the respondents was found to be 8.35. The analyzed data reveals that majority of the respondents had low level of existing knowledge and the mean pre-exposure (existing) knowledge scores of the respondents were not very high. So, the

knowledge level of the respondents can be enriched by imparting nutrition education, because the main objective of nutrition education is to equip the care-givers with knowledge and skills in various aspects of proper nutritional care of the preschool age children so that this vulnerable age group shall not be deprived of the full potentiality to be a bright and adult in later life.

Impact of Nutrition Education in Terms of Gain in Knowledge by the Respondents

While assessing the existing nutritional knowledge of the mothers it was observed that in all the aspects both in basic five food groups and nutritional deficiency disorders, the knowledge level of the mothers was low.

Therefore, nutrition education was imparted to the mothers to improve their nutritional knowledge by considering these aspects and the impact of nutrition education among the mothers was assessed in terms of gain in knowledge by administering the same knowledge scale after 7 days of imparting nutrition education and the results are presented under the following heads:

- Mean post-exposure knowledge scores of the respondents
- The difference between mean pre-exposure knowledge and mean post-exposure knowledge scores of the respondents

Table 1: Mean pre-exposure (existing) knowledge scores of the respondents

Sl. No.	Aspects	Mean pre-exposure (existing) knowledge scores	Maximum possible scores
1.	Basic five food groups	5.51	10
2.	Nutritional deficiency disorders	2.84	10
3.	Overall knowledge	8.35	20

Table 2: Mean post-exposure knowledge scores of the respondents

Sl. No.	Aspects	Mean post-exposure knowledge scores	Maximum possible scores
1.	Basic five food groups	9.03	10
2.	Nutritional deficiency disorders	7.73	10
3.	Overall knowledge	16.76	20

Table 3: Difference between mean pre-exposure knowledge and mean post-exposure knowledge scores of the respondents

Sl. No.		Mean pre-exposure	Mean post-exposure	'z' value
1	Basic Five food groups	5.51	9.03	35.65*
2	Nutritional deficiency disorders	2.84	7.73	32.17*
3	Overall knowledge	8.35	16.76	65.35*

*- significant at 5 per cent level

Mean post-exposure knowledge scores of the respondents

The Table 2 shows the mean post-exposure knowledge scores of the respondents on the given aspects.

It is evident from the Table 2 that the mean post-exposure knowledge scores of the respondents on basic five food group was 9.03 and the mean existing knowledge scores of respondents regarding nutritional deficiency disorders was 7.73. The overall mean post-exposure knowledge scores of the respondents was found to be 16.76.

Difference between mean pre-exposure knowledge and mean post-exposure knowledge scores of the respondents.

The difference between mean pre-exposure knowledge scores and mean post-exposure knowledge scores has been termed as “gain in knowledge”. The results are presented in Table 3.

The results revealed that the difference between mean pre-exposure knowledge scores and mean post-exposure knowledge scores were found to be significant in case of the two aspects.

There was an increase in knowledge scores of the respondents in all the given aspects which include basic five food groups and nutritional deficiency disorders, which indicated a significant gain in knowledge by the mothers at the post-exposure.

The findings are in accordance with (Prakash *et al.*, 2012) that the nutrition education improved the nutrition knowledge of parents and their children which in turn improved their food behavior and dietary diversity in urban Bangalore, India. Similar study was done by Kabahenda (2006) who reported that the nutrition education intervention was effective in improving caregivers’ food selection practices and meal planning skills and improve children’s nutritional status and growth in Western Uganda.

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