

Effect of Nutrition Education Programme in Changing Knowledge of Proper Intra-Familial Dietary Distribution of Food among Different Age Groups of Women

A. M. M. Mokarram Hossain¹, Noorzahan Begum² and Khaleda Islam³

1 & 3 Institute of Nutrition and Food Science, University of Dhaka, Dhaka, Bangladesh.

2. Institute of Post Graduate Medicine and Research, Shahbagh, Dhaka, Bangladesh.

Introduction

Study indicated that energy need decreased as age increased due to lower basal metabolic rates and reduced energy expenditure⁽¹⁾. Dietary studies showed that energy intake was less than the recommended allowances in persons past 59 years of age⁽²⁾, with the exception of vitamin B₁₂⁽³⁾ and calcium⁽⁴⁾ intake. Indeed surveys revealed that food consumption had decreased with increased ages⁽⁵⁾ and the intake of food was remarkably higher for males than females in all age groups⁽⁶⁾. Study also showed that the head of the household ate the lion share of the family diet and was found to be taking excess nutrients except, retinol and ascorbic acid in comparison to other members of the family⁽⁷⁾. The limit of knowledge, affecting the dietary behaviour had long been studied⁽⁸⁾. Within the population group, there are individuals on the one

hand, who consumes too much food and are over weight and on the other hand, individuals who do not consume food, are under weight and are at risk of being deficient in all nutrients⁽⁹⁾.

Since the women have the responsibilities to prepare foods and maintenance of nutrition among infants, children and adults inside the family, nutrition education to these women on proper familial allocation of dietary food are essential⁽¹⁰⁾. In order to meet this need, nutrition education programme has been designed and implemented containing some special aspects of intra-familial distribution of dietary food, as curriculum. The present paper described the effectiveness of the same nutrition education programme in terms of changing knowledge among the different age groups of women in a village of Bangladesh.

Materials and Methods

The study was carried out in a village, about 30 km northwest of Dhaka City.

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The area of the village was approximately 2 square km. with a total population of about 920. The study place was a rural village within the proximity of the Dhaka City and was easily accessible. The village consisted of 164 households and 75 of them were selected for the study following simple random sampling technique. The food distributors majority of whom were wives, formed the sample of the study. Information on age levels of the respondents were collected. Age levels of the respondents were divided into three groups. They were 15 to 29 years, 30-44 years and 45 to 54 years. A nutritional educational programme on some aspects of proper intrafamilial distribution of food was planned and implemented. Level of knowledge of different aspects of intrafamilial distribution of food was planned and implemented. Level of knowledge of different aspects of intrafamilial distribution of food was judged on three scales, e.g. Full knowledge (F.K.) Partial knowledge (P.K) and No knowledge (N.K) based on multiple choice of questions. Full knowledge means all relevant answers marked correctly, partial knowledge means at least one

correct answer was given and No knowledge means no reply or wrong scoring. An interview schedule was prepared considering all the variables under study. It was pre-tested and then finalized on the basis of the results of the pre-test. Data were collected from the selected respondents using this instrument in pre and post education phases. A one day educational programme was chalked out for implementation in the study area. It was decided that the programme could be implemented in small batches through group discussion and lectures by using different methods and medias. Accordingly the study population was divided into seven small batches and the entire village was covered in seven days. After a gap of seven days each batch was evaluated to observe the change in knowledge. Data collected were processed and presented in tabular forms. Knowledge gained in terms of Full knowledge, Partial knowledge and No knowledge had been compared among different age groups. Appropriate statistical tests were applied where necessary.

Table 1 : Respondents knowledge on body building and repairing food vs age groups(N = 75)

Age Group (in years)	Pre-Education			Post-Education		
	(F.K.)	(P.K.)	(N.K.)	(F.K.)	(P.K.)	(N.K.)
15-29	3.2%	83.9%	12.9%	83.9%	16.1%	
30-44	-	82.7%	7.35	79.3%	6.9	13.8%
45-54	-	80%	20%	80%	13.3%	6.7%
Total	1.3%	82.7%	16%	81.3%	12.1%	6.6%
95% confidence interval	0 to 3.9	74.1 to 91.3	7.7 to 24.3	72.4 to 90.1	4.7 to 19.3	1.1 to 12.3

Z= -10,(P<0.01) for Full Knowledge.

FK= Full Knowledge

PK= Partial Knowledge

NK=No Knowledge

Table 2 : Distribution of knowledge on the sharing of meat and eggs in the family vs. age groups(N = 75)

Age Groups (in years)	Pre-Education			Post-Education		
	(F.K)	(P.K)	(N.K)	(F.K)	(P.K.)	(N.K.)
15-29	-	42.0%	58.0%	35.5%	61.3%	3.2%
30-44	-	17.2%	82.8%	34.5%	58.6%	6.9%
45-54	-	33.3%	66.7%	53.3%	40.0%	6.7%
Total	-	30.6%	69.4%	38.6%	56.0%	5.4%
95% confidence interval	-	20.2 to 41.0	60.1 to 80.7	28.3 to 49.6	45.7 to 67.2	0.3 to 10.5

Z = — 4.2, (P<0.01) for full Knowledge

FK= Full Knowledge

PK= Partial Knowledge

NK=No Knowledge

Table 3 : Knowledge on the sharing of milk and milk products vs. age groups (N=75)

Age Group (in years)	Pre-Education			Post-Education		
	(F.K.)	(P.K)	(N.K.)	(F.K.)	(P.K.)	(N.K.)
15-29	-	96.0%	3.2%	83.9%	16.1%	-
30-44	-	89.6%	10.4%	100%	-	-
45-54	-	93.3%	6.7%	53.3%	46.7%	-
Total	-	93.4%	6.6%	84.0%	16.0%	-
95% confidence interval	-	87.8 to 99.0	6.6 to 12.2	75.8 to 92.3	7.7 to 24.3	- - -

Z= - 10.4 (p<0.01) for Full Knowledge

FK= Full Knowledge

PK= Partial Knowledge

NK= No Knowledge.

Table 4 : Respondents knowledge on the dietary allowances of pregnant and lactating mothers in relation to others women vs. age groups(N=75)

Age Groups (in years)	Pre-Education			Post-Education		
	(F.K.)	(P.K)	(N.K.)	(F.K.)	(P.K.)	(N.K.)
15-29	-	61.11%	48.7%	67.7%	32.3%	-
30-44	-	69.0%	31.0%	72.4%	20.7%	6.9%
45-54	-	33.3%	66.7%	60.0%	40.0%	-
Total	-	58.6%	41.41%	68.0%	29.3%	2.7%
95% Confidence interval	-	57.5% to 69.7	30.3% to 52.5	57.5% to 78.5	13.0% to 39.6	- to 6.2

Z=-8.8, (P<0.01 for full knowledge)

FK= Full Knowledge

PK=Partial Knowledge

NK=No Knowledge

Table-5 : Knowledge on the types of foods that are to be served after delivery vs. age groups of the respondents(N=75)

Age Groups (in years)	Pre-Education			Post-Education		
	(F.K.)	(P.K.)	(N.K.)	(F.K.)	(P.K.)	(M.K.)
15-29	-	90.3%	9.7%	90.3%	9.7%	-
30-44	-	72.4%	27.6%	82.8%	-	17.2%
45-54	-	86.7%	13.3%	86.7%	13.3%	-
Total	-	82.7%	17.3%	86.8%	6.6%	6.6%
95%	-	74.1	8.0	79.0	1.0	1.0
Confidence interval	-	to 91.2	to 26.6	to 94.4	to 12.3	to 12.2

Z=-10.7 (P<0.01) for Full Knowledge

FK= Full Knowledge

PK= Partial Knowledge

NK= No Knowledge

Table-6 : Overall knowledge on intrafamilial distribution of food by age group of respondents (N=75)

Age Groups (in years)	Pre-Education			Post-Education		
	(F.K.)	(P.K.)	(N.K.)	(F.K.)	(P.k.)	(N.k.)
15-29	0.7%	74.8%	75.5%	72.3%	27.1%	0.6%
30-44	-	66.2%	33.8%	73.8%	17.2%	9.0%
45-54	-	65.3%	34.7%	66.6%	30.7%	2.7%
Total	0.3%	69.6%	30.1%	71.7%	24%	4.3%
95%	0.2	65.0	25.5	67.2	19.7	2.3
Confidence interval	to 0.8	to 74.2	to 34.7	to 76.2	to 28.3	to 6.3

Z=-23.8,(P<0.01) for Full Knowledge

FK= Full Knowledge

PK= Partital Knowledge

NK= No Knowledge

Results

About 41% of the respondents were in the age group of 15 to 29 years and 20% were in between 45 and 54 years of age. About 38% of women were in the age group of 30 to 44 years. (not shown in the table).

Before conducting the nutrition education programme, only 3.2% of the 15-29 years age group had Full knowledge, 83.9% had only Partial knowledge and 12.9% had No knowledge on the subject of body building and repairing food. After the nutrition education programme, 83.9% of the 15-29 years age group, 79.3% of the 30-44 years age group, and 80% of the 45-54 years age group gained Full knowledge and thus brought down the proportions of Partial and No knowledge respondents respectively (Table-1).

It has also been seen that none of the three age groups had Full knowledge on the sharing of meat and eggs, before education. After the educational programme, 35.5% of the 15-29 years of age group, 34.5% of the 30-44 years age group, and 53.3% of the 44-54 years age group had acquired Full knowledge on the subject (Table-2). Furthermore, before education, 96.0% among the 15-29 years age group, 89.6% among the 30-44 years age group, and 93.3% among the 45-54 years age group only had partial

knowledge on the sharing of milk and milk products. After the education, 83.9% of the 15-29 years age group, 100% of the 30-44 years age group and 53.3% of the 45-54 years age group had acquired full knowledge (Table-3). Before educational programme 'Full knowledge' on the subject of dietary allowances of pregnant and lactating mothers in relation to other women was possessed by no one age groups. Majority had partial knowledge only among the three age groups. Dispensing of the education, had resulted 67.7% of the 15-29 years age group, 72.4% of the 30-44 years age group and 60% of the 45-54 years age group of acquiring Full knowledge (Table-4). In pre-education 90.3% had the partial knowledge among 15-29 years age group regarding types of foods that are to be served after delivery. The number was reduced to 9.7% in post education period. In the 30-44 years age group and 45-54 years age group, 82.8% and 86.7% of the respondents acquired full knowledge after nutrition education programme simultaneously (Table-5) In the Table 6 overall knowledge of respondents estimated on the basis of five variables. (e.g. Table-1, Table-2, Table-3, Table-4, Table -5). It was observed that at pre-education stage among 15-29 years age groups 75.5% had 'No knowledge' and 74.8% had 'Partial knowledge' only. After the education 73.3% acquired 'Full

knowledge' and 27.1% acquired 'Partial knowledge' among the same age group. Only 66.2% and 65.3% had 'Partial knowledge' among 30-44 years and 45-54 years age groups before education and they were decreased to 17.2% and 30.7% respectively after the nutrition education programme. Differences between the proportions of those who had Full knowledge before education and acquired it after education are statistically significant ($P < 0.01$).

Discussion

Research conducted with people over 65 years old, indicated that information which causes high anxiety about health, may be a good factor for changing behaviour⁽¹¹⁾. Thus it is better to create a motive for changing nutritional behaviour by the positive influence of a good diet that has on health⁽¹²⁾. Various factors must be considered while developing nutrition education programme for the women. The programme should not be emphasised on drastic changes on eating patterns, but attempt is to be taken to use the established eating pattern which are going on in the community. Thus nutrition education must be associated with established intrafamilial dietary eating pattern of the community. Our study area was a small village near Dhaka. Population in the study, were the women, majority of whom were the wives of heads of the households. These women, irrespective of ages

lacked of knowledge on different aspects of intrafamilial distribution of food. The post educational findings showed highest increase of knowledge among 30-44 years age groups followed by 15-29 years and 45 to 54 years age groups respectively. The fact that the change of nutritional knowledge of the elderly is lower than that of younger groups. This findings co-relates with the findings of Jalso S.B. et al⁽¹³⁾ and Fusillo A.E. and Beloians A.M.⁽¹⁴⁾ and also testifies the need of higher nutrition education directed towards elderly women than the younger groups.

Summary

The study has been carried out in a village near Dhaka with an aim to compare the knowledge on intrafamilial distribution of food among 75 different ages of women respondents, responsible for dietary food distribution inside the family. These women irrespective of ages, commonly lack of knowledge on different aspect of intrafamilial distribution of food. After conducting an educational intervention programme, achievement of Full knowledge in 30 to 44 years age group was observed to be the highest (73.8% on an average, followed by 15 to 29 years age group (72.3) and 45 to 55 years age group (66.6%) respectively. Difference between the proportions of those who had full knowledge before education and acquired it after education

are statistically significant ($P < 0.01$). It is also found that the nutritional knowledge of the elderly is lower than the younger group. Though the number of respondents in 45 to 54 years group

was small (20%) compared to 15 to 29 years age group (41%) and 30 to 44 years age group (38%) respectively, yet aging has an important role in bringing in the change of nutritional knowledge

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