

An Effective Nutrition Education Programme for Women in Bangladesh

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Introduction

The general level of human health in Bangladesh is not as high as it should be⁽¹⁾. Nutrition is frequently needed regardless of income, geographical locations, cultural background and social status or level of education⁽²⁾. An affluent but nutritionally illiterate people, that eat more, shows a need for nutrition education. The real goal of nutrition education is to make diet better - to have people eat a life sustaining and life enhancing diet^(3,4,5). An understanding of the role of nutrition and its applications to daily life can be regarded as preventive medicine^(4,6,7). Women are the great asset of the nation. They can be grown up as a productive citizens, if they are helped to achieve optimum health through sound nutrition. Good nutrition provides the foundation of work and promotes mental abilities and self confidence. Nutrition education should, therefore, be regarded as an investment in the development of human resources. Women often serve as primary source of nutrition information for many family members^(8,9). Some nutrition education programmes have demonstrated an increase in nutritional knowledge from pretest to post test^(10,11,12,13,14,15), but the retention of these informations over a period of time was not measured. The

current paper sought to determine the change in and retention of nutrition knowledge of the women participants after administering a pre test and post test questionnaires before and after 7 days following the nutrition education programme and a follow up test 1 month after following the completion of the programme in a village of Bangladesh.

Materials and Methods

A nutrition education programme was conducted among 75 households by simple random sampling technique. To determine which topics, the nutrition education programme would cover, we surveyed a random of 20 percent of approximately 600 women in a separate village. Sixty two women favoured their top 4 choices of 10 nutrition topics. They were as follows: (a) Awareness about food function (b) Willingness to consume more body building and repairing food (c) different food choices after delivery and (d) interest in food requirement in different age, sex and state of women. For these 4 topics, we ordered instructional materials and developed lessons. Using these materials and focusing the topics, we developed 3 goals for the nutrition education programme. They were: - (a) To provide nutrition information (b) to demonstrate

techniques for teaching in nutrition (c) To familiarize participants with a variety of instructional materials suitable for nutrition education. Annexure -1 presented the approximate time schedule and sequence of activities for the nutrition education programme. Following the principles of achievement test construction of Gronlund (16), we developed 'True' and 'False' knowledge items for each topics. A panel of graduate nutritionist established the content validity. The participants of one another nutrition education programme completed a pilot test of the instrument. Based on these responses, we revised or omitted items. The final knowledge instrument consisted of 12 knowledge items. The complete pretest questionnaire also elicited background information from the women and the complete posttest questionnaire gave evaluation information. The same questionnaires were used in pre-test, post-test and follow up examinations. Procedures and the test instrument received approval from the committee on research of the Institution. Nutrition education programme was conducted in batches, varied in number from 10 to 12 women. A one day educational programme was implemented simultaneously among the batches. Evaluation was started by administering posttest questionnaires after 7 days following the nutrition education programme and a follow up test was done 1 month after the education programme. Scoring system followed as recommended by Oppenheim⁽¹⁷⁾. For the 12 item knowledge test, each correct knowledge response received 2 points while no points were given for 'Don't know' answers. A

knowledge score for each person was determined for each topics. Paired-t-test, assessed the significance of differences among pre-test post-test and follow up knowledge scores in 4 topics and total tests. The data were processed with standard computer programmes (18).

Results

A group of 75 women completed both pretest, posttest and followup questionnaires. These women varied in age, educational levels, occupational status, family sizes and monthly income. Mean age of the women were 33.22 ± 9.75 years (Table-1). Seventy Nine percent of the women were housewives (Table-2). Ninety five percent of the respondents read up to class V (Table-3). Of the 75 women who completed pretest posttest questionnaires before and after 7 days following the nutrition education, all of them returned to follow up questionnaires after one month. The mean scores of the 75 women who completed both pretest, posttest and follow up test appeared in the Table 4. For the total 24 point test, the mean pretest score was 10.63 ± 1.26 and the mean posttest score was significantly higher ($p < 0.01$) at 27.96 ± 0.22 . Subscores of the 4 topics were also increased significantly ($p < 0.01$) from pretest to posttest except the food choice group. The total mean test score of 75 women who returned to follow up assessment instrument was 23 ± 0.23 which was significantly ($P < 0.01$) lower than they had at post testing. The follow up group also scored significantly lower on each subtests except the food choice group than they had at post-test ($P < 0.01$).

Table-1 : Distribution of women in relation to head of household

Women	Percent
Housewife	79
Daughter	9
Mother	12
Total	100.00

Table-2 : Distribution of women by age

Age group (Years)	Percent
15-29	41
30-44	39
45-54+	20
Total	100.00

Mean 33.22+9.75

Table-3 : Distribution of women by educational level

Education level	Percent
Upto Class V	95
Class VI- X	3
S.S.C. +	2
Total	100.00

Discussion

The health and nutritional status of the people depend upon economic status, food availability and also on the nutritional knowledge. Awareness about social influence and existing local circumstances are of great importance for the nutrition educators. The nutrition educator is

responsible for the smooth conducting of the programme, including lesson plan, development of questionnaires, evaluation technique etc. The questionnaire developed in this study was of unique in nature. It has got the content validity as well as measurement technique. But the pre-test questionnaire knowledge questions may have some degree of influences on the scores of post-test and follow up questionnaires. To over come this, we did not announce plan for posttesting and follow up nutrition programme. The women who returned to the follow up questionnaires had given positive reaction to the nutrition education programme. But most interesting was that, the knowledge gained at post test was significantly higher than pre test after 7 days of nutrition education programme and the retention of knowledge was significantly lower than the post test following 1 (one) month after. This indicated that nutrition education must be a continuous process, so the better retention of knowledge could be achieved. The women specially valued the new information on 4 topics, that they had identified during the preassessment. They appreciated the information on the subjects as their major concern for the family members and felt that nutrition education programme reinforced their selfconfidence in dealing with these subjects. Although, women generally may not favour the nutrition education programme formate⁽¹⁹⁾, ours was well received as had been other nutrition education programmes^(20,21). Although, some women reported minimum transfer of information from a nutrition

Table-4 : Nutrition knowledge score of all women who completed pre-test, post-test and follow up questionnaires (n=75)

<u>Test</u> Topics	<u>Possible</u> Score	<u>Pre-test</u> Mean±SD	<u>Post-test</u> Mean±SD	<u>Follow-up</u> Mean±SD
Food Function	6.0	2.46±0.84	6.73±0.96 ^a	5.77±0.64 ^b
Growth Food	10.0	3.9±0.44	11.86±0.51 ^a	10.17±0.56 ^b
Food Choice	2.0	2.06±0.36	2.33±0.75	2.00±0.00
Food Requirement	6.0	2.23±0.64	7.03±1.0 ^a	6.02±2.01 ^b
Total Score	24.0	10.63±1.26	27.96±0.22 ^a	23.97±0.23 ^b

- a. Significantly greater than pretest scores, paired 't' test P< 0.01.
- b. Significantly less than post test score, paired 't' test, P< 0.01.

Annexure-1

Schedule and content of nutrition education programme

<u>Approximate Time</u> (Minutes)	<u>Activity</u>
15	Wel-come, Introduction
45	Completion of pre-test
25	Questionnaires
	Funnelgraph display and discussion on food function.
20	Live food display and discussion on growth food
20	Photo show and discussion on food choice.
20	Slide and tape show and discussion on food requirements.
45	Completion of post-test questionnaires.

education programme⁽²²⁾, we found a higher degree of change of knowledge as seen in other follow up nutrition education programme^(22,23). In another study,⁽²⁴⁾ six rounds of training and retraining were conducted on nutrition education among 42 Tribal women of Bangladesh. Knowledge gained in each retraining was statistically significant but retention of knowledge was only significant up to second round. This result confirmed our study. We could not conclude that, all women could be benefited from a nutrition education programme. However, under our conditions, positive changes occurred in knowledge and indicated that this type of nutrition education programme could be an effective means of disseminating nutrition knowledge. The follow up evaluation indicated, a one day nutrition education programme could do retention of nutrition knowledge 1 month later. Our nutrition education programme had certain elements

that helped to contribute its success such as, the assessment of women's need in advance, the careful planning and organisation of education programme, the variety of activities provided and the higher degree of women's involvement in the nutrition education programme. Therefore, considerations must be given to the above factors in dealing with successful non-formal nutrition education programme among women in rural Bangladesh.

Summary

Nutrition education programme was carried out among 75 women in a village of Bangladesh. An one day educational programme was chalked out containing different topics of Nutritional knowledge. Various methods and medias were used during the educational programme. Assessment on the level of knowledge before and after 7 days following the nutrition education programme were done by standard questionnaires. Mean knowledge score obtained by the women initially was 10.63 ± 1.26 which was increased to 27.96 ± 0.22 after a gap of 7 days following the educational programme and was significantly greater than pretest ($P < 0.01$). In the follow up test e.g. after a gap of one month period following the nutrition education programme, the mean retention score of knowledge was found to be 23.97 ± 0.23 which was significantly ($P < 0.01$) less than post test score.

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