

Evaluation of Nutrition Education Program among Selected Participants of BAN-HRDB

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Abstract

This is a descriptive cross sectional study, which was carried out considering both secondary and primary data. The study population include participants from various professions like Block Supervisors, Teachers, Imams, NGO workers, Ansar/VDP members, UP members and Housewives who participated in the Nutrition Education Program (NEP) by Bangladesh Applied Nutrition and Human Resource Development Board (BAN-HRDB) with the idea that they would eventually disseminate knowledge to the grass root level population and motivate them for better nutritional status. A total of 2000 participants were taken for evaluating their performance in both pre and post-test conducted by BAN-HRDB. A marked difference was observed among participants after the NEP. The mean score of nutritional knowledge before the NEP among the participants was 51.62%, which increased to 84.45% after the NEP that seems highly significant at 0.005% level. Professional variations were also observed on the score. Block Supervisors and teachers secured better nutritional score than the other professionals. The mean score among the Block Supervisors was 53.59% before the NEP, which increased to 86.97% after the NEP. The results of the study revealed that training on nutrition are very encouraging and useful for improvement of nutritional knowledge.

Key Words: Nutrition Education, Nutritional Score, Block Supervisor and BAN-HRDB

Introduction

Widespread malnutrition in any community causes retarded physical and mental growth resulting in inefficient and less active manpower. High prevalence of malnutrition in Bangladesh with a progressive deterioration over time has now been well established by a number of studies¹⁻³. The causes of malnutrition are multiple. It is the

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result of various overlapping and interrelated social, economic, ecological factors coupled with food crisis, lack of nutritional knowledge and infectious diseases.⁴ Many causes of malnutrition can be prevented if the people of all walks of life specially the mothers know how to make the best use of their available resources. Therefore, importance of non-formal nutrition education among the population has been emphasized.^{5,6}

Nutrition education is the process by which individuals gain the understanding, skills, and motivation necessary to promote and protect their nutritional well being through their food choices.⁷ Nutrition education should be available to all individuals and families. The fundamental philosophy of nutrition is that the effort should focus on the establishment and protection of nutritional health rather than on crisis intervention.⁸

Illiteracy in the poor rural community in Bangladesh is regarded as the major constraints in communicating the nutritional knowledge program. If some simple and effective messages on nutrition and food habit could be passed on to the community a great deal of achievement is possible. With a view to improving the situation and in order to pass the nutritional messages to the mass population a program is being carried out by Bangladesh Applied Nutrition and Human Resource Development Board (BAN-HRDB).

BAN-HRDB, under Agriculture Ministry, has been conducting Nutrition Education Program (NEP) all over the country. They train those persons who have direct contact with mass population in the rural areas. If they are provided with basic nutritional knowledge and asked to communicate the messages to the mass population, the objectives of the NEP can be successfully achieved.

The sustainability of the acquired knowledge into dietary practices needs to be assessed over defined time intervals. Thus BAN-HRDB Nutrition Education Program (NEP) was evaluated in terms of pre and post nutritional knowledge of the selected target beneficiaries of BAN-HRDB.

Materials and Methods

The study was a purposive evaluation conducted amongst the selected population of BAN-HRDB program beneficiaries of selected areas of Bangladesh. The study population includes participants from different professions, such as Block-Supervisors (Agriculture Extension Department), teachers, Imams, NGO workers, UP members and Ansar / VDP members and housewives. Before pre-test, a standard questionnaire was prepared by expertise from different sectors, related to the NEP and nutrition. A pilot survey was done to finalize the questionnaire. The same questionnaire was used immediately after the NEP i.e. post-test.

Nutritional knowledge of the participants was evaluated before and after each training through the standard questionnaire. The questionnaire was answered by the participants themselves. An effective scoring system was prepared to determine the difference between pre and post knowledge evaluation. For every correct answer 5

marks was assigned and the total score thus obtained by the respondents individually. As such for twenty questions the total score was obtained out of 100. In course of evaluation four categories were established like marking <40 is 'poor', 40-59 is 'fair', 60-79 is 'good', 80 and above is 'excellent'. The total scores obtained by individual participant before and after the training were used to assess the initial level of his/her knowledge in nutrition and the improvement respectively. Since pre and post education mean scores obtained were a pair of observations among the participants, a paired 't' test was applied to test the statistical significance of the knowledge gained as a result of the Nutrition Education Program.

Results

A total number of 2000 individuals were selected for this study. Figure 1 shows the distribution of the respondents according to their professions. Block Supervisions were more emphasized as they have better contact with rural people and opportunity for disseminating knowledge to others.

Table 1 reveals the knowledge about nutrients. After the NEP, 88.20%, 91.80% and 86.3% of the respondents had good knowledge about energy giving, body building and protective food respectively. Table 2 and 3 show the distribution of respondents on the pre and post test nutritional score according to their professions. Professional variations were also observed on the score. Block Supervisors and teachers secured better nutritional score than the other professionals. But little improvement was noticed among UP members. The score of <40 was 14.2, 19.6, 35.1, 19.7, 45.8, 53.8, and 20.1 percent in pre-test and 0.6, 1.2, 3.1, 7.0, 4.2, 2.6, and 2.0 percent in post-test among the Block Supervisors, Teachers, Imams, NGO workers, Ansar/VDP members, UP members and housewives respectively. At the same time the score of 80 and above was 6.5, 4.8, 1.0, 4.2, 0.0, 2.6, and 3.4 percent in pre- test and 78.2, 69.0, 63.3, 64.8, 54.2, 20.5 and 59.0 in post-test among the Block Supervisors, Teachers, Imams, NGO workers, Ansar/VDP members, UP members and housewives respectively.

Table 4 reveals the mean score of pre-test and post-test. The mean score in pre test was 51.62 and 84.45 in post-test, which indicates a clear improvement in knowledge due to the NEP. The improvement was found to be statistically significant ($P < 0.005$).

Based on this improvement of knowledge, inference can be drawn that nutrition education and training is a useful intervention in improving the nutritional knowledge among the participants.

Discussion

The participants in the rural areas of Bangladesh did not have good knowledge on nutrition. But when they were exposed to the Nutrition Education Program, they exhibit good performances. This was positively reflected in this study. The study revealed that the nutritional knowledge of the participants improved after receiving the NEP although

there are some scopes to improve the NEP further. The study showed that among the participants mean nutritional knowledge score was 51.62 before the NEP that increased to 84.45 after receiving the NEP which seems highly significant at 0.005 percent level. Professionals from different disciplines also made some difference on the performance of the participants Again, 78.2 percent of the Block Supervisors and 69 percent of the Teachers secured excellent score in post-test. But little improvement was observed among UP members.

Kabirullah, *et al*⁷ reported similar improvement of nutritional knowledge through a Non-Formal Applied Nutrition Education Program on a group of students attending a vocational rehabilitation center.

The results of this study, therefore, emphasize the need for non-formal nutrition education to address the nutritional problems prevailing amongst them. It also justifies the need for retraining to make the nutritional knowledge more perfect and lasting.

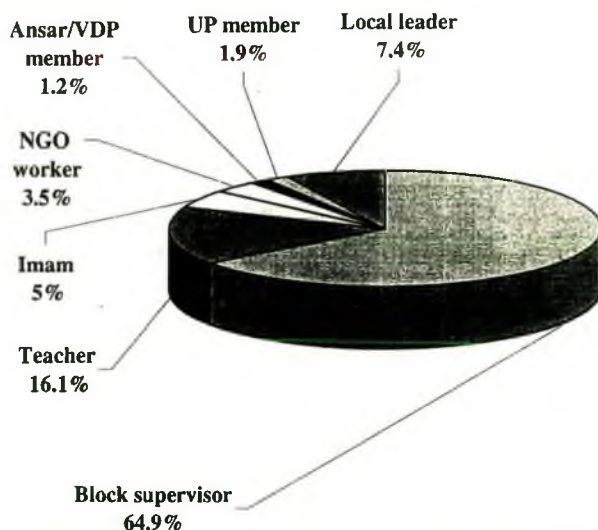


Figure 1. Distribution of the respondents according to their professions

Table 1. Distribution of respondents on the knowledge about different foods by pre and post-test

Knowledge about nutrient	Pre-test		Post-test	
	Correct	Incorrect	Correct	Incorrect
Energy giving food	885 (44.30)	1115 (55.80)	1763 (88.20)	237 (11.90)
Body building food	1104 (55.20)	896 (44.80)	1835 (91.80)	165 (8.30)
Protective food	896 (44.80)	1104 (55.20)	1725 (86.30)	275 (13.80)

Table 2. Distribution of respondents' pre-test nutritional score according to the professions

Profession	Pre-test (Score obtained out of 100)				Total
	<40	40-59	60-79	≥80	
Block Supervisor (N=1298)	184 (14.2)	607 (46.7)	423 (32.6)	84 (6.5)	1298 (100)
Teacher (N=322)	63 (19.6)	153 (49.2)	90 (26.4)	16 (4.8)	322 (100)
Imam(N=97)	34 (35.1)	40 (41.2)	22 (22.7)	1 (1.0)	97 (100)
NGO worker (N=71)	14 (19.7)	33 (46.5)	21 (29.6)	3 (4.2)	71 (100)
Ansar/VDP member (N=24)	11 (45.8)	11 (45.8)	2 (8.4)	0 (0.0)	24 (100)
UP member (N=39)	21 (53.8)	13 (33.4)	4 (10.2)	1 (2.6)	39 (100)
Local leader (N=149)	30 (20.1)	70 (47.0)	44 (29.5)	5 (3.4)	149 (100)
Total (N=2000)	357 (17.9)	927 (46.3)	606 (30.3)	110 (5.5)	2000 (100.0)

Figures in the parenthesis indicates percentage

Table 3. Distribution of respondents' post-test nutritional score according to the professions

Profession	Post-test (Score obtained out of 100)				Total
	<40	40-59	60-79	≥80	
Block Supervisor (N=1298)	8 (0.6)	105 (8.1)	170 (13.1)	1015 (78.2)	1298 (100)
Teacher (N=322)	4 (1.2)	29 (9.0)	67 (20.8)	222 (69.0)	322 (100)
Imam(N=97)	3 (3.1)	14 (14.4)	19 (19.2)	61 (63.3)	97 (100)
NGO worker (N=71)	5 (7.0)	6 (8.5)	14 (19.7)	46 (64.8)	71 (100)
Ansar/VDP member (N=24)	1 (4.2)	2 (8.3)	8 (33.3)	13 (54.2)	24 (100)
UP member (N=39)	1 (2.6)	17 (43.6)	13 (33.3)	8 (20.5)	39 (100)
Local leader (N=149)	3 (2.0)	2 (1.3)	56 (37.7)	88 (59.0)	149 (100)
Total (N=2000)	25 (1.3)	175 (8.8)	347 (17.3)	1453 (72.6)	2000 (100.0)

Figures in the parenthesis indicates percentage

Table 4: Overall distribution of respondents according to mean score by pre and post-test

Respondents	Mean score	Standard Deviation	Standard error
Pre-test	51.62	16.07	0.35
Post-test	84.45	17.08	0.38

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