Change in Knowledge of the Rural Women Co-operators about Child Care and Weaning Practices after a week long Training Programme on Nutrition

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Introduction

Malnutrition is a serious problem of national significance in Bangladesh alike other developing countries.[1,2,3,4]. The vast majority of the children of this country are malnourished and the prevalence was found to be higher among rural middle class families[4]. About 94% children in 6-71 months age group were found to suffer from first, second and third degree malnutrition[4]. About 73% children 0-4 years age group were anaemic while about 19% children of the same age group were found to suffer from Vitamin A deficient visual impairment and as such about 30,000 children go blind every year[5]. Infant mortality rate is as high as 110 which is 10-15 times higher than that in the developed countries[6]. Poor infant feeding practices and their consequences are the major determinants of infant mortality and morbidity.

In this country nutritional deprivation of the growing children starts at the weaning age specially in low birth weight babies which is the outcome of maternal malnutrition during pregnancy[7]. It is said that young children are the worst-hit of malnutrition during weaning age[8]. Mothers particularly in rural areas lack nutritional knowledge particularly of weaning practices which are directed by misconceptions and taboos. They often do not know how, when and what to feed the children during this critical period of their lives which make them vulnerable to malnutrition.

As malnutrition is a function of multiple inter-related and overlapping causes, lack of nutritional knowledge specially on child feeding practices also greatly contribute its occurence among the children. To reduce the prevalence of malnutrition among the children, mothers should be educated and trained on nutritional knowledge in general and child care and weaning practices in particular.

This study was carried out to improve the nutritional knowledge of the rural Women Co-operators of Bangladesh Rural Development Board (BRDB) and thereby to change their existing knowledge regarding child care and feeding practices through imparting nutrition education and training for a period of 6 days and to evaluate it.

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Materials and Methods

Arrangement of Nutrition Training and Selection of Trainees :

Institute of Nutrition and Food Science (INFS) Dhaka University undertook a massive nutrition training for Women Co-operators jointly with Bangladesh Rural Development Board (women's programme) having financial assistance from Canadian International Development Agency (CIDA). Forty eight Nutrition Training Programmes were conducted on 1000 Women Co-operators in 48 Upazilas throughout Bangladesh from March to September, 1989.

Training Syllabus :

The training programmes were conducted following a pre-set training syllabus which included all the basic aspects of nutrition: nutritional deficiency diseases-e.g. protein energy malnutrition (PEM), nightblindness, anaemia, ariboflavinosis, goitre etc.; primary health care, balanced diet, low and high cost diets, food for pregnant and lactating mothers, cooking practices, importance and use of colostrum, breast feeding, weaning food preparation and practices, oral rehydration therapy, child feeding practice during illness, immunization, hygiene and sanitation, live-food display, growth monitoring etc.

Conduction of Training :

Each training programme was of six days duration and was conducted by three Instructors including one male. Training was arranged at the Upazila Head Quarter and the Women Co-operators used to come to attend the training from their respective villages every day. First four days were allocated for theoritical classes and group discussions while 5th and 6th days were spent for live food display, demonstration of weaning food preparation and growth monitoring of the children. Weaning food such as 'Khichuri' and 'Halowa' were prepared with locally available cheap food stuffs and were fed to the mothers and their babies. To make the training more effective, booklets, posters, flannelgraphs and flip charts were used in the training class and these were supplied to the trainees as reference materials.

Assessment and Evaluation of Nutritional Knowledge :

The level of existing and improved nutritional knowledge of all the women were assessed and evaluated before and after each training programme with a pre-set structurad questionnaire. To analyse the pre-and post training questionnaires, different questions in the questionnaire were given specific score values and the difference between mean scores obtained in pre assessment and post evaluation was taken as the improvement i.e. change of nutritional knowledge.

Results

Particulars of the Women Co-operators :

A total of 994 women co-operators were given nutrition training in 48 upazilas. About 80% of them were between 21 and 40 years of age while about 11% were below 20 years and only 1.6% were more than 50 years of age (Table 1). Regarding literacy, about 14% women co-operators were illiterate while about 86% were literate and amongst the literate ones 43.2% and 34.8% women had primary and secondary level of education respectively (Table 2). Table 3 shows that about 82.3% trainees were Muslims and the rest were Hindus, Buddists and Christians. More than 81% were married

and 9.5% unmarried while 9.3% were widow and/or divorced. By occupation most of them were housewives (99%). Amongst the trainees only 11.7% women had attended previous nutrition training course whereas more than 88% were not exposed to any sort of previous nutrition training or campaign (Table 4).

Improvement of Nutritional Knowledge :

Total score obtained by each trainee was used to assess her level of knowledge. At the beginning of training, the mean score of nutritional knowledge among the women co-operators was 44.6% which increased to 88.9% after training indicating significant improvement of overall nutritional knowledge P<0.01 (Table–5).

Regarding use of colostrum, before training 33.3% women told that colostrum should be discarded while about 66.7% were in favour of feeding it (Figure 1). Most of the women (64.6%) were not aware of its importance. Only 19.8% gave opinion that colostrum was bad and poisonous. About 15.8% women knew that colostrum was good and beneficial for the infant. But after training, all these women co-operators except one could change their attitude in favour of the use of colostrum. More than 98% women however, could know that colostrum was good and beneficial for the infants.

Almost all the trainees before and after training opined that the children should be breast-fed (Table 7). The Table 7 also shows that the percentages of women who told 'more body building and repair foods should be given to the children' before training was about 31.6% which after training increased to 80.6%. The improvement of knowledge in this regard was significant at 5% level (P<0.0). Regarding weaning and supplementary feeding, according to 75% trainees weaning food should be started at the age of 4-6 months while 25% thought that it should be started after twelve months and above (Table 8). However, after training all the women (99.9%) except one expressed their opinion in favour of 4-6 months as the appropriate time of starting weaning food.

Table 9 and 10 present the results regarding food practices during illness of the children. Before training about 46 (Table 9) and 40 percent (Table 10) women told that children should be stopped giving foods in cases of diarrhoea and fever or measles respectively. But after training about 98% trainees were able to change their attitude and replied that foods of any kind should not be stopped or restricted while the children suffer from either diarrhoea and fever or measles.

Table 1. Distribution of the Women Co-operators by age group (N=994)

Age Groups	No. of trainees	Percentage
Upto 20 years	109	10.9
21-30 "	490	49.4
31-40 "	307	30.8
41-50 "	73	7.3
50 years +	50	1.6
Total	994	100.0

Table 2. Distribution of women co-operators by education level (N=994)

Education level	No. of trainees	Percentage
Illiterate	142	14.3
Upto class V	429	43.2
Class VI to X	346	34.8
S.S.C.	52	5.2
H.S.C	22	2.2
Graduate & above	3	0.3
Total	994	100.0

Table 3. Distribution of women co-operators by religion, marital status and occupation (N=994)

Religion					Marital Status				Occupation			
Muslim	Hindu	Buddist	Christian	Total	Married	Unmarried	Widow/ Divorced	Total	Housewif	Service/ Agriculture/ Business	Student	Total
82.3	14.3	2.8	0.6	100.	081.2	9.5	9.3	100.0	90.1	5.5	4.4	100.0
(818)	(142)	(28)	(6)	(994)	(807)	(94)	(93)	(994)	(896)	(55)	(43)	(994)

Note: figures in the parentheses are numbers.

Table 4. Distribution of the trainees by attendance to any previous nutritional training course (N=994)

Attended Previous Training Course	No. of trainees	Percentage
Yes	116	11.7
No	878	88.3
Total	994	100.0

Table 5. Distribution of the average scores obtained by the Women Co-operators in Pre and Post evaluation of Nutrition training.

	Before training (Pre-test)	After training (Post-test)
Mean Score	44.6	88.9
Standard Deviation	± 8.5	± 6.0
d= 392	P < 0.01	

Fig. 1. Distribution of the women co-operations by-their opinion regarding use of colostrum before & after training.

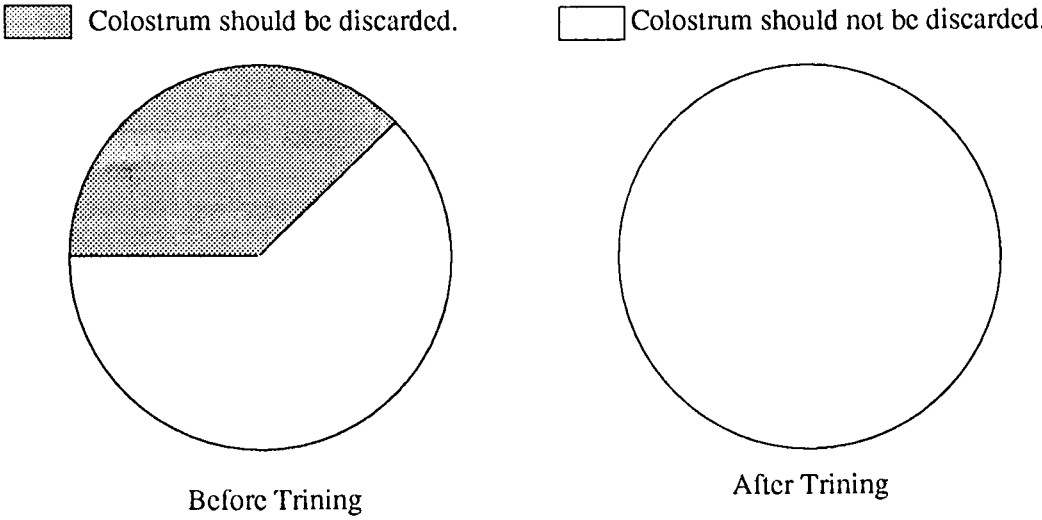

Table 6: Distribution of the women co-operators by their opinion regarding colostrum before and after training (N=994)

Opinion	Percentages of women co-operators	
	Before training	After training
Colostrum is good for the infant	15.8	98.1
Colostrum is bad & Poisonous	19.6	0.00
No. idea whether good or bad	64.6	1.9
Total	100.0	100.0

Table 7. Distribution of the trainees giving correct answers to different questions on child feeding before and after training (N=994)

Correct Answers	Percentages of women co- operators		
	Before training	After training	Value of P at5% level
The children should be breast fed	99.8	100.0	-
More body building & repair foods should be given to the children.	31.6	80.6	P<0.05

Table 8. Distribution of the trainees giving different answers to the question- 'What is the appropriate age for a child to start feeding supplementary food?'-before and after training (N=994)

Time of starting supplementary food	Percentages of the trainees	
	Before training	After training
4-6 months	75.2	99.9
One year +	24.8	0.1
Total	100.0	100.0

Table9. Distribution of the trainees giving different answers to the question- 'Is it right to stop feeding the baby in diarrhoeal condition?' - before and after training.

Answers	Percentages of trainees (N=994)	
	Before training	After training
yes	46.3	1.3
No	53.7	98.7
Total	100.0	100.0

Table 10. Distribution of the trainees giving different answers to the question- 'Is it right to stop feeding the child in case of fever or measles?'- before and after training.

Answers	Percentages of trainees (N =994)	
	Beforetraining	After training
Yes	39.9	1.4
No	60.1	98.6
Total	100.0	100.0

Discussion

In rural areas of Bangladesh, the women co-operators i.e., the mothers are lacking proper and scientific knowledge about nutrition in general and child feeding (i.e. weaning practice) in particular. They usually rear their children with traditional practices of feeding which are mostly governed by misconceptions and taboos directed by their grandmothers and other adult female members of their families.

As the rural mothers are mostly illiterate (Literacy Rate for rural female 13.7% in 1981)[6] and unprivileged, they are rarely

exposed to nutrition education particularly on weaning practices and therefore, the level of nutritional awareness among them is poor. Many studies in the recent past showed that the rural women had very poor but similar level of existing nutritional knowledge which increased significantly upon imparting nutrition education and training[9,10,11]. In this study, similar result was obtained where before training mean score of nutritional knowledge of the trainees was 44.6% which significantly increased to 88.91% ($P<0.01$). This improvement indicates that the women co-operators could change their knowledge when they were exposed to training.

Colostrum secreted from the breast in the first few days after delivery has the capacity to protect the infant from infectious diseases. But in Bangladesh it is wasted for 2-3 days assuming that it is impure and poisonous while the child instead being fed honey or sugar water [5,11]. In this study about one third of the women initially believed that colostrum should be discarded and majority of them (64.6%) did not know whether it was good or bad while 20% considered it was poisonous (Table 6). But after completing the training almost all of them could say that colostrum was good and important for the infant.

In a previous study around 90% mothers in Dhaka and Khulna districts were found to have a favourable attitude towards breast feeding[12]. But in this study it was found that only 0.2% mothers were not favouring breast feeding at the beginning who after training have changed their views into 100% favourable attitude (Table 7). This initial high percentages of mothers favouring breast feeding might be the result of disseminating activities regarding importance of breast feeding through various media during last decade.

In this study before training only about one third of the women thought that children should be given more protein rich foods (Table 7). But the percentages of women knowing this important message was significantly increased to 80.61% after training ($P<0.05$)

It was found before training that more than 46% and about 40% women expressed their views in favour of stopping foods to the children suffering from diarrhoea and fever or measles respectively (Table 9 & 10). But after training, in both the cases more than 98% of the women co-operators changed their attitude that children should be given foods of any kind during diarrhoea and fever or measles.

The results, therefore, emphasizes the unquestionable need of imparting non-formal nutrition education and training for rural women co-operators in order to change their attitude by improving their nutritional knowledge.

Summary

Rural women co-operators (mothers) are very much unaware about scientific knowledge on nutrition particularly on child feeding practices as they are mostly illiterate and arrested by food misconceptions and taboos. In order to change their existing attitude and knowledge a week long training on this subject was arranged for 994 women co-operators of Bangladesh Rural Development Board in 48 Upazilas of Bangladesh

with financial assistance from Canadian International Development Agency. Their knowledge and attitude was evaluated before and after training through pre-set questionnaire. It was found that mean score obtained before training was 44.6% which increased to 88.9% after training indicating a statistically significant improvement of knowledge (d=392, P<0.01). Positive attitude of the rural women regarding use of colostrum, children's need of more protein rich foods, appropriate time of starting supplementary feeding and feeding during diarrhoea and measles except breast feeding was found initially unsatisfactory which changed markedly to a satisfactory level after training. The findings revealed that the training programmes were very much useful in changing child feeding attitudes of the rural women co-operators.

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