

A Study on the Effect of Nutrition Education in Changing Knowledge, Attitude and Practice on Food and Related Behaviour

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Introduction

Malnutrition is a widespread and persistent problem in Bangladesh which has amply been demonstrated in the past in different studies particularly in the national nutrition surveys (1,2,3). A high percentage of children are malnourished from birth. These malnourished children die more frequently than the wellnourished children. Consequently infant mortality in this country is as high as 125 per thousand live birth (4). Weaning period is very critical for our infants. Deaths during this period are about 10-15 times higher in this country than in developed countries (5). Several studies (6,7) indicated that the weaning practice in this country is inappropriate and unduly delayed.

Maternal nutrition is related to the birth weight. In an INCAP study in rural Guatemala (8) it was observed that a supplement of 20,000 calories total (200 kcal/day) to a pregnant woman reduced low-birth weight children in malnourished population by a significant proportion. Many nutritionists agree that nutrition education has produced impressive results in changing food behaviour. It can help to promote the adoption of many low-cost or cost-free practices to improve the nutritional status of the people particularly children and mothers. Many culturally ingrained behaviour of dietary practices adversely effect the nutritional status. Nutrition education can play a vital role to change attitude and behaviour towards proper food practice.

In view of these considerations nutrition education for women is considered very important for the promotion of better health, particularly for mothers and children in any community. Present study examines the effect of nutrition education in changing knowledge, attitude and practice on feed behaviour in some rural community in the country.

Methodology

Training method

During June 1981 to June 1984 a total of 12,228 rural mothers in twenty locations covering mothers of 200 villages of 'Village Child Development Project' of UNICEF were trained in various aspects of nutrition by nutritionist from the Institute of Nutrition and Food Science (INFS). Mothers in small group were trained in a centre through lecture, discussion, live demonstration of food. The preparation of weaning food was practiced by the participant mothers. During discussion appropriate audiovisual aids were also used. Nutrition education presented in the way easily understood by the mothers. Foods were discussed according to their various functions in the body as rice, wheat, potato, oil-provide energy; pulses, fish, meat are necessary for the growth, repair, and maintenance of body tissue; fruits and vegetables for the protection against diseases. Importance of colostrum, breast feeding and, weaning and supplementary feeding were clearly discussed.

Evaluation Method

To evaluate the effect of nutrition education a socio-economically comparable control area was identified where nutrition education was not given. Two hundred and ten trained mothers from the project area and two hundred and twenty three mothers from the control area were selected randomly for evaluation. Evaluation was conducted by using a pretested questionnaire on the knowledge, attitude and practice of mothers on food and related behaviour. Correct answers to questions were computed and grouped for analysis 't' test was done to show the significance of the difference between the observations in the two groups. The difference in food behaviour between the project and control area is considered to be due to training effect.

Results :

Table 1—describes and attitude of Mothers towards food groups and the practice of the knowledge gained by them in the project areas as compared with the same of mothers of the control area. This table shows that there are appreciable improvement in knowledge, attitude and practice in the project area over the control area. Statistical test ('t' test) of the result shows the difference in knowledge, attitude and practice between project and control area are highly significant ($P < 0.0001$).

Table 1—PERCENT OF MOTHERS GIVING CORRECT RESPONSES

Category of topics	Project area (n=210)			Control area (n=223)		
	Knowledge	Attitude	Practice	Knowledge	Attitude	Practice
Energy giving food	95.7	92.8	68.6	0.0	13.5	8.0
Food for growth repair and maintenance	97.1	91.9	83.3	33.2	24.2	27.4
Food for protection against disease	94.7	76.6	71.4	5.8	19.3	21.0

This table shows that almost 80% of the mothers breastfed their babies in both the areas. Nutrition education in this case could not be proved meaningful ('t' test was insignificant). But education colostrum and, weaning and supplementary food at the project area is statistically significant ($P < 0.0001$) when compared with the mothers of control area.

Table 2—PERCENT OF MOTHERS GIVING CORRECT RESPONSES ON TOPICS IN INFANT FEEDING

Category of topics	Project areas (n=210)			Control area (n=223)		
	Knowledge	Attitude	Practice	Knowledge	Attitude	Practice
Colostrum	94.8	89.6	78.1	5.8	8.5	9.9
Breast feeding	17.1	98.0	76.2	11.2	99.6	82.5
Weaning and supplementary feeding	63.3	92.8	57.1	13.9	15.7	9.4

Discussions

This study demonstrated the effect of nutrition education of the mothers of rural areas in Bangladesh. The repeated nutrition education given over 3 years period could bring measurable change in food behaviours. Almost every mother remembered what they learned during the course of training. More than half mothers practiced what they learnt over last 3 years. People normally take long time to change (9). Mohanram (10) reviewed nutrition education programmes carried out in different parts of India and observed that knowledge and attitude towards weaning and supplementary food were improved and the concepts of weaning were put in practice by mothers after training. In rural Thailand it was found that the nutritional improvement in mild PEM children were largely due to nutrition education. It plays an important role in increasing mother's awareness of proper infant feeding practice (11). It may be concluded from this study that a substantial improvement in nutrition knowledge and significant positive change in attitude towards proper practice on food behaviour is possible after proper dissemination of relevant knowledge.

Summary

Nutrition education was imparted during June 1981 to June 1984 to 12,228 rural mothers in twenty locations covering 200 village by mobile nutrition training teams from the Institute of Nutrition and Food Science, University of Dhaka. Six days nutrition training was followed according to a prescribed syllabus. To evaluate the effect of the training a study was conducted on randomly selected 210 trained mothers in the project areas and 223 mothers in the control area using a questionnaire. More than 95 per cent of mothers remembered what they learnt about the functions of food and the use of colostrum and about 70 per cent of them said they practiced it. Sixty three per cent of the trained mothers gave correct responses on their knowledge on weaning and supplementary feeding and 57 per cent of them said that they practiced what they learnt. These findings were found to be statistically significant when compared with the control group.

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References

1. Nutrition Survey of East Pakistan, 1962-64. US Department of Health, Education and Welfare, Washington D.C. pp. 1-426, 1966.
2. Nutrition Survey of Rural Bangladesh 1975-76. Institute of Nutrition and Food Science, University of Dhaka. pp. 138, 1977.
3. Nutrition Survey of Rural Bangladesh, 1980-81. University of Dhaka. pp. 1-281, 1983.
4. Grant, J.P.; The State of the World's Children 1985. UNICEF, Communication and Information Division, 866 UN Plaza, New York. pp. 76-77, 1985.
5. Scrimshaw, N.S. and Underwood, B.A. Timely and Appropriate Complementary Food and Nutrition Feeding of the Breast-Fed Infant-An overview, Food and Nutrition Bulletin, 1(2), 19-21, 1980.
6. Khan, Moslemuddin. Infant feeding practices in rural Meheran, Comilla, Bangladesh. The American Journal of Clinical Nutrition. 3,2356-2364, 1980.
7. Malek, M.A., Chowdhury, M.M.H. and Bhuyan, M.A.H. A study into the Requirements and Availability of Appropriate Education Material for A Nutrition and Health Education Programme (Scientific report). MCH-Based Family Planning Project. Munshiganj, Bangladesh. pp. 1-74, 1987.
8. Lechting, A., Habicht, J.P., Yarbrough, C. et al, Influence of food supplementation during pregnancy on birth weight in rural population of Guatemala. In Proceedings of the 9th International Congress of Nutrition, Mexico. Vol. 2, pp. - 4-52, 1972.
9. Ullbrich, R.D. and Briggs, G.M. Education to Combat Malnutrition. In McLaren, Donalds, (Ed.); 'Nutrition in the Community'. John Wiley and Sons. pp. 545-2 8, 1976.
10. Mohanram, M. Dissemination of Nutrition Information on Weaning Practices. Report of a Workshop on Weaning Foods. UNICEE Regional Office for South Central Asia, 73 Lodhi Estate, New Delhi, 110003. pp. 91-100, 1983.
11. Dhanamitta. Sakera, Virejaillee, SS and Valyasevi, Area. 'Implementation of a conceptual achome for improving the Nutritional status of the rural poor in Thailand', Food and Nutrition Bulletin. 3(3), 11-15. 1883.