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Knowledge and Practices of Punjabi Rural Mothers Regarding The Feeding of Rural Pre-School Children

Rajbir Sachdeva, Harvinder and R. Puri

Department of Foods and Nutrition, College of Home Science, Punjab Agricultural University, Ludhiana 141 004, Punjab, India

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ABSTRACT A sample of 47 rural pre-school children were selected from two villages of Ludhiana district and divided into two groups *viz.* Nutrition Education Group (NEG) and Control Group (C.G.).Nutrition education was given to 24 mothers of the children of NEG for three months to modify and improve the diets of their children. Teaching methods used were lectures, participatory demonstration and discussion. Visual aids, poems and folkfare were utilised to make learning interesting and effective. The results indicated that the gain in knowledge, attitudes and practices of mothers were higher in the NEG as compared to CG. It was further observed that the quantum of improvement on the knowledge, attitudes and practices were 3.39, 1.12 and 1.77 times, respectively in the NEG. The data further reported that there was adoption of desirable practices by mothers belonging to NEG.There was also change in the feeding practices of children in the NEG. The findings of the present sutdy indicated that the mothers of NEG had learnt to a considerable extent but the interaction with them needs to be for a much longer time to bring about all desirable changes.

Malnutrition is wide-spread in the developing countries of the world. In India 1 to 2 per cent of the pre-school children suffer from severe forms of Protein Energy Malnutrition. Among the pre-school children 4.6 per cent suffer from different grades of vitamin A deficiency. In Asia, more than 5 million children are affected by xerophthalmia and every year at least 5,00,000 of them become blind (Devadas and Saroja, 1987). Likewise 40 to 60% are found to be anaemic. About 35 to 40% of the total deaths occur among children below five years of age (Mohapatra et al., 1985). Iron deficiency anaemia is a problem of serious public health significance as it impacts on physical development, behaviour and work performance (WHO, 1989). Pre-school age is one of the most vulnerable period, mainly due to easy susceptibility to malnutrition and infection. Impressions gained during these years have far raching effects in later life. The ignorance factor coupled with poverty aggravates the malnutrition problem. Dietary habits of our population must be improved for long range effects on the health of the children. This can be achieved by educating the mothers. This signifies that nutrition education is the sinequanon for bringing a permanent and favourable solution to the problem of malnutrition (Shah, 1978). Besides improving the nutrition of the young child, it also helps the whole family as the mother's concept about right diet and how to provide it are changed (Kumari et al., 1985). Nutrition knowledge is of importance only if it is introduced and practised by one who is most involved - the mother. Keeping this in view, the present study was undertaken.

METHODOLOGY

A sample of 47 anaemic pre-school children aged 3-5 years from two villages of Ludhiana District belonging to low socio-economic group were selected and divided into two groups, *viz.* Nutrition Education Group (NEG) and Control Group (CG).

Nutrition Education Group (NEG): Twenty four women (mothers of pre-school children) were imparted nutrition education in vernacular for a period of three months about balanced diet, nutrient requirements, improving nutritive value of foods, anaemia, its causes of eradication through diet. The teaching was carried out through lectures, discussions, charts, posters, participatory demonTstration, visual aids and actual foods accompanied by poems and folkfare were utilised to make learning sessions interesting and effective.

Control Group (CG) : Twenty three women (mothers of pre-school children) who did not get any nutrition education served as Controls

for comparison.

The evaluation of nutrition education was done through a composite questionnaire by the pre and post test of Knowledge, Attitude and Practice (KAP) of subjects in the NEG and CG, for each question of Knowledge and practices that was answered correctly a score of one was awarded. For the one that was answered wrongly or unanswered a score of zero was given. For evaluation of Attitudes of women, favourable statements were scored - 5 for strongly agree, 4 for agree, 3 for undecided, 2 for disagree and 1 for strongly disagree. The scoring was reversed for unfavourable statements. Pre-testing questionnaire was administered to the women of both the groups before the experiment. On the completion of the nutrition education programme, post test questionnaire was readministered to find out the change in KAP of women enrolled in both the groups as reflected by scores obtained on post test.

The data was statistically analysed using student 't' test.

RESULTS AND DISCUSSION

I. *Impact of Nutrition Education on KAP Scores* : The comparison of pre and post test scores is depicted in table 1. The results revealed that the gain in scores or improvement was significantly ($P< 0.01$) higher in NEG as compared to CG in the three areas. Gain in Knowledge was 40.96, Attitudes 7.35 and Practices 36.66 per cent. The quantum of improvement (post test scores/pretest scores) on Knowledge was 58.04/17.08 = 3.39 times, Attitudes 75.76/68.41 = 1.12 times and Practices 83.87/47.21 = 1.77 times.

II. *Distribution of KAP Scores* : The distribution of KAP scores of mothers is presented in table 2. It is evident that on post test improvement in KAP scores was found only in the subjects who were given nutrition education for three months. In CG the scores remained more or less same as T_1. In pre-test 67% subjects obtained very low scores *i.e.* 20% in Knowledge, on post test 75% improved upto an extent of 40 to 80%(Table 1, 2). Regarding Attitude scores, it was found that majority of mothers obtained between 60-80%, whereas on post test 25% got between 60-80%. Improvement in Practices of mothers was also observed. In pretest majority (63%) obtained between 40-60% scores, whereas on post test, all were above 60% and majority (62%) scores were 80%.

Similar findings were also reported by Menon and Prema (1978) in Trivandrum, who reported the mean knowledge Score before training was 58.8 and after three months it increased to 72.04. Mittal (1982) also reported that rural mothers of Himachal Pradesh who were imparted nutrition counselling obtained more scores on post test as compared to pre-test. Similar finding as observed in the present study was reported by Mary and Jeannette (1985) that women who received nutrition education had significantly higher Knowledge and Attitude scores than those who had not received nutrition education.

III. *Impact of Nutrition Education on Feeding Practices* : It was observed that there was change in the feeding pattern of children in NEG - as evidenced from table 3. Mothers started giving variety of foods and in larger quantities. At T_1 no special food and nutritious *chapati* was given to the children, but at T_2 29 per cent of the children were given special food and 79 per cent started eating nutritious *chapati* (Wheat flour +gram flour + green leafy vegetables). There was great change in the intake of green leafy vegetables *i.e.* 92 per cent children started eating mustard leaves, fenugreek leaves and mint chutney. It was seen that the consumption of jaggery at T_1 was almost negligible as it was thought to be hot, spoiled the teeth and would result in diabetes in later years of life. The present findings indicates that after imparting nutrition education most of the children started eating jaggery. It was further observed that at T_1 only 46 per cent of mothers bought vegetables without considering their nutritive value. At T_2, 100 per cent of the subjects reported giving importance to the nutritive value of vegetables along with price and ease of cooking.

The concept about feeding children during fever, cold, cough and diarrhoea did not show much improvement, though a slight improvement was observed. Another belief in hot and

Table 1 : Percentage scores obtained by mothers

Test	*Groups*	*Knowledge*	*Attitudes*	*Practices*
Pre-test	N.E.G. (n=24)	17.08±10.62	68.41±16.12	47.21±11.67
	C.G. (n=23)	9.87±3.61	72.84±11.12	35.18±13.48
Post-test	N.E.G.	58.04±15.03	75.76±7.13	83.87±10.44
	C.G.	10.54±3.52	71.82±10.29	35.26±10.18
Gain in scores	N.E.G.	40.96	7.35	36.66
	C.G.	0.66	-1.02	0.08
Quantum of	N.E.G.	3.39	1.12	1.77
improvement	C.G.	1.06	0.98	1.00
	't' value	12.53**	12.21**	12.58**

Mean + S.D. ** Significant at P<0.01

Table 2 : Distribution of percentage KAP scores obtained by mothers

KAP	*N.E.G. (n=24)*						*C.G. (n=23)*					
Scores	*Knowledge*		*Attitudes*		*Practices*		*Knowledge*		*Attitudes*		*Practices*	
	T_1	T_2	T_1	T_2	T_1	T_2	T_1	T_2	T_1	T_2	T_1	T_2
< 20												
n	16	2	-	-	-	-	23	23	-	-	4	-
%	67	8					100	100			17	
20-40												
n	7	4	2	-	7	-	-	-	-	-	10	15
%	29	17	8		29						44	65
40-60												
n	1	10	3	-	15	-	-	-	2	2	9	8
%	4	43	13		63				9	9	39	35
60-80												
n	-	7	13	17	2	9	-	-	16	17	-	-
%		28	54	71	8	38			70	74		
> 80	-	1	6	7	-	15	-	-	5	4	-	-

Table 3 : Impact of nutrition education on feeding practices

Feeding practices of mothers	*N.E.G. (n=24)*				*C.G. (n=23)*			
	T_1		T_2		T_1		T_2	
	n	%	*n*	%	*n*	%	*n*	%
1. Eating with the family	20	83	22	92	18	78	12	52
2. Special food given	-	-	7	29	-	-	-	-
3. Nutritious Roti fed	-	-	19	79	-	-	2	9
4. Green leafy vegetables fed	5	21	22	92	8	35	10	43
5. Fed in fever	16	67	19	79	7	30	6	26
6. Fed in cold and cough	9	37	12	50	5	22	8	35
7. Fed in Diarrhoea	11	46	13	54	9	39	8	35
8. Fed hot/cold foods	14	58	10	42	21	91	22	96
Buying Practices Governed by								
1. Price (Cheap)	13	54	12	50	18	78	20	87
2. Nutritive value of food	11	46	24	100	10	43	11	48
3. Ease of cooking	16	67	-	-	20	37	21	91

cold foods remained more or less the same. It was noticed that these were deeply engraved beliefs and practices which are difficult to change and may need more concerted efforts to change these concepts.

Devadas (1979) reported the improvement

in the dietary practices of NEG. It was observed that before imparting nutrition education 20 per cent washed vegetables before cutting, but after education it was observed that 80 per cent started washing vegetables before cutting. Similarly consumption of pulses, green leafy vegetables improved to a considerable extent. In another study conductd by Devadas et al. (1982), in Coimbatore reported that no mother fed nutritious recipes to their children prior to nutrition education programme, but after the education 34 per cent started giving these foods to their children.

The results of the present sutdy reported that improvement in KAP scores indicated a positive influence of nutrition education of Knowledge, Attitude and Practices of mothers of preschool children. However, the mothers of NEG had learnt to a considerable extent, but the interaction with them needs to be for a much longer duration *i.e.* minimum for six months to bring about all desired changes. Motivated mothers given input of realistic and practical nutrition education utilised it in feeding their children. Such educational efforts must form part of all ongoing nutrition and health programmes.

RECOMMENDATIONS

The intervention programme at the comunity level should be multiprolonged, keeping in view their cost benefit analysis and severe financial constraints in the rural areas of the developing countries. Further, training for self employment should be encouraged in the rural women so that their economic level is raised and they can feed their children in sufficient quantity as well as in quality.

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