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Efficacy of Nutrition Counselling on Knowledge, Attitudes and Practices of Urban and Rural Elderly Males

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ABSTRACT Sixty elderly males aged 60-75 years were randomly selected from urban (I) and rural (II) areas of Ludhiana district belonging to low socio-economic group. Nutrition counselling was imparted by nine individual and three group contacts for a period of three months to the subjects along with their wives. Teaching was carried out through lectures, participatory demonstrations, discussion, visual aids like charts and posters. The evaluation of the impact of nutrition counselling was extremely low on all the three components (knowledge, attitudes and practices) in both the groups during pre-test (T1). On the post-test (T2) scorers of group I improved by 1.22 times in knowledge, 1.55 times on attitudes and 1.2 times on practices, which was significantly (P£0.01) more than that of group II. The data showed that urban elderly scored more than their counterparts as they were more literate and were exposed on media like TV, radio, newspaper etc. It is suggested that the intervention programme at the community level should be multi prolonged and minimum for six months.

INTRODUCTION

Old age is the greatest challenge that an individual faces. It is a continuous process that begins with conception and ends with death. More than half of the world's elderly population is in the developing countries and India currently ranks fourth among the countries, which have large elderly population in the developing countries i.e. nearly 76 million, whereas 80 per cent reside in rural areas (Nassem 2000). Malnutrition among the aged is caused by a number of factors such as condition of the family, illiteracy, poverty, ignorance, superstition, lack of food, frequent infections etc. (Devi and Prem Kumari 1998).

Nutrition counselling is the sinequanon for bringing a permanent and favourable solution to the problem of malnutrition. It is an effective tool of changing the food habits of the people without affecting their sentiments. It is a process by which knowledge, attitudes and beliefs about food and health are channelised into actual practices which are sound and consistent with the individual needs, purchasing power, food availability, health and socio-cultural background (Orstead et al. 1985). This signifies that nutrition counselling is needed to evaluate the effect on knowledge, attitudes and practices of the elderly.

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MATERIALS AND METHODS

A sample of sixty elderly males aged 60-75 years were selected randomly from urban (group I) and rural (group II) areas of Ludhiana district belonging to low socio-economic status. Nutrition Counselling was imparted by nine individual and three group contacts for a period of three months to the subjects along with their wives. They were taught about functions of food, importance of balanced diet, nutrient requirements, improving nutritive value of foods, anaemia, its causes and eradication etc. The teaching was carried out through lectures, discussions, demonstrations and visual aids like charts, posters etc. The evaluation of nutrition Counselling was done through a composite type questionnaire at T_1 and T_2 for assessing knowledge, attitudes and practices (KAP) in both the groups. For the one 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. Score of half was given for partly correct answer. Each favourable statement was scored 3 for agree, 2 for disagree and 1 for undecided. For pre-testing, KAP questionnaire was administered to the subjects before nutrition counselling was started. On the completion of the programme, these were re-administered. This was done to find out change in KAP of elderly enrolled in group I and II as reported by scores obtained at T_2. The data was statistically analysed using two mean 't' test.

RESULTS AND DISCUSSION

The demographic information of the subjects in the present study revealed that average per capita income in group I and II was Rs. 898/-and Rs. 858/- p.m. Majority of the subjects in group I (60%) and II (70%) belonged to joint families. The data showed that 16.6 and 53.3 per cent of the subjects were illiterate. The literacy rate of Punjab was 69.95, which was 79.1 and 65.1 in urban and rural areas (Anon, 2001), which illustrated that Punjab urban elderly were more educated than their rural counterparts.

It was seen that 73.3 and 80% of the subjects in group I and II were vegetarian. The present study showed that all the subjects in group I and II took breakfast and dinner, while lunch was taken by 76.6 and 20 per cent subjects at T_1 in both the groups respectively. Majority of the subjects in group I (83.3%) and group II (43.3%) started taking lunch at T_2 as they were educated not to have much gap in between the meals as it might create health problems.

I. Impact of Nutrition Counselling on KAP

Table 1 depicted the comparison of the scores obtained at T_1 and T_2. The results revealed that the gain in KAP scores (post scores-pre scores) were higher in group I as compared to group II. Gain in scores was 2.06 and 0.73, 4.47 and 4.13 and 2.6 and 1.67 in group I and II respectively. Further, it was reported that quantum of improvement (post scores/pre scores) on K, A and P in group I and II were 1.22 and 1.0, 1.15 and 1.14 and 1.2 and 1.1 times respectively. The data showed that urban elderly scored more than their counterparts as they were more literate and exposed to media like television, radio, newspaper etc. Fey et al. (2002) reported that knowledge scores improved in the subjects as a result of reading the monthly nutrition newsletter. Outram et al. (2002) too reported a positive change in overall KAP scores in the elderly subjects through nutrition education programme.

II. Distribution of KAP Scores

The distribution of KAP scores is presented in Table 2. It was seen that majority of the subjects (56.6) at T_2 in group I obtained scores upto 40-60 per cent in K, while in group II 53.3 per cent subjects obtained scores upto 20-40% and 46.6 per cent subjects improved upto 40-60 per cent scores. Regarding the Attitude scores, it was found that in group I, out of 70% subjects who obtained 60-80% scores at T_1, increased to 73.3% of the subjects obtained scores upto the extent of 60-80 per cent scores at T_2 and 16.6% subjects improved even upto>80% scores. Improvement in the Practices by the subjects revealed that in-group I, 63.3% who had 40-60% scores at T_1, while 36.6% obtained 60-80% scores at T_1. At T_2 majority of the subjects (53.3%) obtained practices scores upto the extent of 60-80% while in group II, 80% who had 40-60% scores at T_1 and 16.7% subjects obtained 60-80% scores at T_2 shifted to 46.7 and 53.3 respectively at T_2.

Similar to the present findings, Fischer et al. (1991) reported a positive influence of nutrition counselling on KAP scores. Thus, it had wide

Table 1: Percentage KAP scores obtained by subjects

Parameters	*Group I*					*Group II*					*t-value*
	T_1	*T_2*	*t-value*	*Gain in scores*	*Quantum of improvement*	*T_1*	*T_2*	*t-value*	*Gain in scores*	*Quantum at of improvement*	*T_2 group I v/s group II*
Knowledge	13.37± 10.86	16.43± 2.25	2.71**	2.06	1.22	6.40± 1.89	6.93± 1.66	2.01**	0.73	1.0	12.73***
Attitude	29.93± 3.57	34.40± 4.02	5.47***	4.47	1.15	27.37± 3.42	31.5± 3.38	5.81***	4.13	1.14	3.02***
Practices	9.23± 1.56	11.83± 1.53	3.96***	2.6	1.2	8.33± 1.21	10.0± 0.98	6.34***	1.67	1.1	2.50**

Values are Mean±SD
**-Significant at 5% level
**-Significant at 1% level
KAP - Knowledge, Attitude, Practices

Table 2: Distribution of KAP scores of respondents

Practices	*Group I (n=30)*				*Group II (n=30)*			
	T_1		T_2		T_1		T_2	
	N	*%*	*N*	*%*	*N*	*%*	*N*	*%*
Knowledge								
<20	-	-	-	-	-	-	-	-
20-40	12	40.0	9	30.0	21	70.0	16	53.3
40-60	14	46.6	17	56.6	9	30.0	14	46.6
60-80	4	13.3	4	13.3	-	-	-	-
>80	-	-	-	-	-	-	-	-
Attitudes								
<20	-	-	-	-	-	-	-	-
20-40	-	-	-	-	-	-	-	-
40-60	6	20.0	3	10.0	13	43.3	7	23.3
60-80	21	70.0	22	73.3	17	56.7	23	76.7
>80	3	10.0	5	16.6	-	-	-	-
Practices								
<20	-	-	-	-	-	-	-	-
20-40	-	-	-	-	1	3.3	-	-
40-60	19	63.3	8	26.7	24	80.0	14	46.7
60-80	11	36.6	16	53.3	5	16.7	16	53.3
>80	-	-	6	20.0	-	-	-	-

scope as the subjects were highly motivated and accepted the advice.

III. Adoption of Desirable Practices

To evaluate the extent of adoption of desirable nutritional practices, individual contacts were made through home visits by follow up programme. Table 3 showed that several practices were taught to the subjects along with their wives like washing vegetables before cooking, reuse fried oil, inclusion of sprouted pulses and salad, cooking in covered pan or pressure cooker etc. It was observed that improved method of cooking and intake of nutritious foods in the diet of the elderly improved the nutritional quality of their diets. It was observed that problems of acidity and indigestion were common as the subjects took more spicy, fried foods, pickles, chutneys, green chillies etc. They were educated not to take more spicy and fried foods and there should be more inclusion of fruits and vegetables in their diets as it reduced the problem of acidity and indigestion. It was seen that the subjects of group II used to put extra ghee in *dal* and vegetables, consumed jaggery mixed in ghee very oftenly and used to put more sugar in tea and milk, as they thought it to be a healthy food. They were educated to reduce the intake of energy rich foods like fats and oils, sugar and jaggery to maintain their ideal body weight. At T_2 there was reduction in these foods and body weight reduced to 3 and 2 kg in-group I and II respectively in a span of three months as the subjects were overweight. It was seen that all the subjects in group I and II took breakfast and dinner, while lunch was taken by 76.6 and 20 per cent of subjects at T_1 in both the groups respec-

Table 3: Distribution of desirable practices by the subjects

Practices	*Group I (n=30)*				*Group II (n=30)*			
	T_1		T_2		T_1		T_2	
	N	*%*	*N*	*%*	*N*	*%*	*N*	*%*
1. Washing vegetables before cutting	13	43.3	17	56.6	13	73.3	15	50.0
2. Cutting vegetables into medium size	19	63.3	21	70.0	15	50.0	19	63.3
3. Avoiding soda in cooking	13	43.3	15	50.0	7	56.6	5	16.6
4. Reuse fried oil	16	53.3	19	63.3	18	60.0	20	66.6
5. Including sprouting pulses	11	36.6	14	46.6	8	26.6	15	50.0
6. Including salads	7	23.3	10	33.3	5	16.6	8	26.6
7. Cooking in covered pan or pressure cooker	26	86.6	27	90.0	21	70.0	24	80.0

tively. Majority of the subjects in group I (83.3%) and group II (43.3%) started taking lunch at T_2 as they were taught not to have much gap in between the meals as it might create health problems. Outram et al. (2002) too reported that pre and post education showed a positive change in their dietary habits and behaviour as a result of nutrition counselling.

CONCLUSIONS

The perusal of the data clearly indicated that KAP scores improved significantly ($p \leq 1.01$) at T_2 in both the groups. Punjab is a prosperous state, still there are pockets of malnutrition among population of the low income group both in urban and rural areas. So there is utmost need to educate elderly regarding nutrition education to facilitate the intake of sprouted pulses, fermented foods, green leafy vegetables, jaggery etc. in their daily dietaries to improve nutritional status. It was observed that old myths were engraved in their minds which needs minimum six months. Integrated programme with proper health, nutrition and education components for the elderly need to be initiated in the country. There should be more provision of senior citizen homes at affordable cost for better living.

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