

EVALUATION OF PRE AND POST TRAINING PRACTICES REGARDING MANAGEMENT OF DIABETES

M. MOHANTY*, S. NANDA*, N.SANT***, J.K. AGARWAL***

The study was conducted on 112 diabetic patients in S.S. Hospital, B.H.U., Varanasi to evaluate the pre- and post- training practices regarding management of Diabetes mellitus. A pre-tested structured respondent schedule was used to collect information regarding the socio-economic status and some of the managerial aspects of the disease by questionnaire cum interview method. Education cum training was imparted to all the respondents in the first three months and in the fourth month evaluation programme was carried out and their level of practice regarding different aspects of diabetic management were assessed by using seven point score method. It was found that training was proved effective for the aspect "Physical exercise" and "Restricted diet" but slight improvement in the practice score was seen in "Precaution in Special Hygienic Condition" aspects. So, continuous education programme was needed to improve their practice rate.

INTRODUCTION

Diabetes mellitus is a Universal health problem affecting human beings at all stages of growth and development. It has been emerging as important public health problem even in developing countries like India, though the disease is known as a disease of affluent society. According to WHO, diabetes is the third prominent disease in the world next to cardiovascular and oncological disorders. The low rate of occurrence of diabetes in India is because of the lack of awareness. The disease invariably comes to light when symptoms become really prominent. The changing food habits with growing accent on fast food i.e.,m preserved and processed foods, which add calories, to sugar and starchy food; and lack of exercises are also responsible for growing incidence.

Almost all daily the diabetics make decisions about their diet, exercise and insuline doses. The self discipline and training is required to adjust to the disease successfully.

The main problem before the Indian community is Management of 'Diabetes Mellitus' Hence, a Guide line talk on the management of diabetes mellitus should arranged. Therefore this study was conducted

with the following objectives.

- i) To know the practice of the diabetic patients regarding the management of the disease.
- ii) To organise and evaluate the "Guide Line Programme" on management of diabetes.

MATERIALS AND METHODS

This study ;was conducted on 112 diabetic patients who were registered in S.S. hospital, B.H.U. Varanasi. A pre-tested structured respondent schedule was used to collect the information regarding the age, religion, caste, types of family, marital status, educational and economic status and some of the managerial aspect of the disease. The managerial aspects included restricted diabetic diet, physical exercises, and precaution spectral hygienic condition such as care of feet, nails, skin, hands, eyes, bath, teeth, cloth. The data was collected by questionnaire cum interview method.

After initial collection of the data, in the first month each day 4 patients were informed to attend the Endocrine Unit, S.S. Hospital, B.H.U.. Two hours education cum training was imparted to them in which all the aspects of the management were covered. In the second and third month the sameprogramme was followed to give them intensive training, and their querries were also solved. In the 4th month, as per the schedule, an evaluation programme was carried out to know the pre and posttraining practices of various management aspects. Their level of practice were assessed by using 'Seven point' score method suggested by Lowe².

* Lecturer, College of Home Science, Ouat, Bhubaneswar.

** Professor, Department of Home Science, B.H.U., Varanasi

*** Professor and Head, Department of Endocrinology, department of Medicine, I.M.S., B.H.U., Varanasi

RESULT AND DISCUSSION

Out of the total respondents surveyed, 59.82% were male. A majority of the respondents belonged to the age group of 40-60 years, followed by 11.7% in the age group of 30-40 years. Also, it was found that a majority of respondents (90.0%) were Hindu, and 57.0% patients belonged to nuclear family. A higher percentage of diabetics were educated and were in service followed by 20.0% of business men which was similar to the percentages of a research project of Maharashtra Government³, i.e. the office workers were more susceptible to this disease because of emotional ups and down and stress of the services.

Proper diet planning is of utmost importance in diabetes. As a general rule diet should provide sufficient calorie to achieve and maintain a desirable body weight. The diet should be individualized and a diet prescribed for one person is usually not suitable for another. The food should not be monotonous as there are many alternative and exchange diet items. The diet restricted in calorie, carbohydrate (60.0%), protein (20.0%) and fat (20.0%) diet initiated. Viswanathan et al⁴ study had been proved to be effective in this metabolic disease control. Table-1 depicts the pre and post training practices of respondents regarding 'restricted diet'. It was observed that before the training programme, most of the

respondents were not very much conscious about their diet. But after the training programme many of them became particular about their diet. It was seen that 25.4 per cent male respondents scored four point which has been ranked under 'fair' practices in pre-training while maximum 32.8% scored 5 point, ranked under good, after the training programme. Similarly, in the case of female respondents their practices to take restricted diet was improved i.e. 24.4% ranked 'fair' and 51.1% ranked 'very fair' in the post practice training. The mean and S.D. score of male and female respondents in the pre-training was 3.4 ± 1.61 and 3.5 ± 0.94 and post training practices was 4.1 ± 1.40 and 4.0 ± 0.94 respectively. The practice of taking restricted diet was improved just significantly in both male and female respondents.

Physical exercises include the yogic exercises, morning and evening walk and light exercises which were the pleasant therapy to control diabetes. As per the pre and post training practices of the respondents regarding the physical exercises was concerned (Table-II), it was found that quite a good number of respondents didn't practice it before the training programme but a significant difference was observed in their practice rate after the training programme.

Maximum male respondents by the physical exercise had fallen under the rank of 'poor', 'fair' and 'very fair'

Table 1 :
Evaluation of pre-and post-training practices of respondents regarding the restricted diet

Rank	Score	Male				Female			
		Pre-training		Post-training		Pre-training		Post-training	
		No.	% age						
Very poor	1	10	14.9	2	3.0	2	4.4	-	-
Poor	2	15	22.4	9	13.4	3	6.7	1	2.2
Fair	3	5	7.5	11	16.4	14	31.1	11	24.4
Very fair	4	17	25.4	15	22.4	21	46.7	23	51.1
Good	5	14	20.9	22	32.8	5	11.1	7	15.6
Very good	6	6	9.0	6	9.0	-	2.0	2	4.4
Excellent	7	-	-	2	3.0	-	-	1	2.2
Total		67	100.0	67	100.0	45	100.0	45	100.0
Mean \pm SD score		3.4 ± 1.61		4.1 ± 1.40		3.5 ± 0.94		4.6 ± 0.94	

Statistical significance :

(1) Male : Pre-training vs post-training $t = 2.69$, $P < 0.05^*$

(2) Female : Pre-training vs post-training $t = 2.52$, $P < 0.05^*$

and had respective percentage of i.e. 14.9%, 34.3% and 28.4% in the pre-training while their rank was 'fair', 'very fair' and good, is 29.9%, 13.4% respondents respectively after the training programme.

Similarly, in case of female respondents, i.e. 22.2%, 11.1%, 20.0% and 46.7% respectively ranked under

respondents maximum (35.6%) fall under 'good rank' followed by 22.2% ranked 'very fair' in the pre-training practices. Only 1.5% male respondents ranked 'excellent' in both pre and post-training practices.

The mean and S.D. of male and female respondents in

Table 2 :

Evaluation of pre-and post-training practices of the respondents regarding physical exercises

Rank	Score	Male				Female			
		Pre-training		Post-training		Pre-training		Post-training	
		No.	% age	No.	% age	No.	% age	No.	% age
Very poor	1	8	11.9	-	-	10	22.2	-	-
Poor	2	10	14.9	3	4.5	5	11.1	7	15.6
Fair	3	23	34.3	14	20.9	9	20.0	17	37.8
Very fair	4	19	28.4	9	13.4	21	46.7	19	42.2
Good	5	7	10.4	27	40.3	-	-	2	2.2
Very good	6	-	-	8	11.9	-	-	-	-
Excellent	7	-	-	6	9.0	-	-	-	-
Total		67	100.0	67	100.0	45	100.0	45	100.0
Mean ± SD score		3.1 ± 1.16		4.6 ± 1.31		2.9 ± 1.22		3.4 ± 0.80	

Statistical significance :

- (1) Male : Pre-training vs post-training $t = 7.01$, $P < 0.001^{***}$
- (2) Female : Pre-training vs post-training $t = 2.30$, $P < 0.05^*$

'very poor', to 'very fair' grade in the pre-training practice and improved their practice of doing the exercises after the training programme which showed 15.6%, 37.8%, 42.4% and 4.4% ranked 'poor' to 'good' grade respectively.

The mean and S.D. score of male and female respondents during pre-training was 3.1 ± 1.16 and 2.9 ± 1.22 where as in post- training it was 4.6 ± 1.31 and 3.4 ± 0.80 respectively. The practice score was improved after the training programme which was found statistically significant.

Precaution in special hygienic conditions included the care of feet, care of nails, care of skin, hands, eyes, teeth clothes etc. which are important part of the management of the diabetes Table-III shows the pre and post-training practices of the respondents regarding the pre-caution taken in hygienic conditions. It was found in the pre-training practices that maximum male respondents (38.8%) ranked 'very fair' followed by 19.4% ranked 'good'. In case of female

pre-training practices were 4.2 ± 1.27 and 3.6 ± 1.47 and in post-training practices were 4.4 ± 0.96 and 3.8 ± 1.31 respectively. The improvement in the practice of the respondents was statistically significant after the guide line programme ($t = 2.60$, $P < 0.05^*$ for male and $t = 2.36$, $P < 0.05$ for female patient.)

CONCLUSION

Different types of audio-visual aids were incorporated for their learning and enhancement of their awareness and practice behaviour regarding the management aspect of diabetes mellitus. The training was proved effective for the 'physical exercises' and 'restricted diet' but only slight improvement in the practice score was seen in precaution in 'special hygienic conditions. Continuous educational programme was needed to improve their attitude towards the disease, which should be gradual and continuous process. The patient should have constant dialogue on all the management aspects. Though, it is a time consuming task, unavoidable but of great benefit.

Table 3:

Assessment of Pre-and post-training practices of the respondents regarding precaution taken in special hygienic conditions.

Rank	Score	Male				Female			
		Pre-training		Post-training		Pre-training		Post-training	
		No.	% age	No.	% age	No.	% age	No.	% age
Very poor	1	3	4.5	-	-	5	11.0	3	6.7
Poor	2	2	3.0	1	1.5	8	17.8	5	11.1
Fair	3	12	17.9	11	16.4	5	11.1	10	22.2
Very fair	4	26	38.8	20	29.8	10	22.2	9	20.2
Good	5	13	19.4	29	43.3	16	35.6	17	37.8
Very good	6	10	14.9	5	7.5	1	2.2	1	2.2
Excellent	7	1	1.5	1	1.5	-	-	-	-
Total		67	100.0	67	100.0	45	100.0	45	100.0
Mean ±	SD score	4.2	± 1.27	4.4	± 0.96	3.6	± 1.47	3.8	± 1.31

Statistical significance :

- (1) Male : Pre-training vs post-training $t = 1.03$, $P > 0.05$ NS
- (2) Female : Pre-training vs post-training $t = 0.68$, $P > 0.05$ NS
- (3) Male vs female (pre-training) $t = 2.23$, $P < 0.05$ *
- (4) Male vs female (post-training) $t = 2.63$, $P < 0.05$ *

REFERENCES

1. Diabetes Mellitus, Technical Report series 727, WHO Geneva, 1985.
2. Lowe, B. Experimental Cookery, John Willey & Sons. Inc. New York, London, 4th Edition, 1966.
3. The Hindustan Times, 1989, 13th Feb. pp. 9.
4. Viswanathan, M., Snehalata, C., Swaminathan, G. and Ranachandran, A. Effect of a calorie restricted, high carbohydrate, high protein low fat diet on serum lipid levels in diabetes, A follow up study, current Topic in Diabetes Research, 1976, pp. 84-85.