



E-ISSN: 2663-2268
P-ISSN: 2663-225X
IJARMSN 2023; 5(2): 184-186
Received: 08-09-2023
Accepted: 11-10-2023

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International Journal of Advance Research in Medical Surgical Nursing

The effectiveness of planned teaching programme on knowledge regarding self-management of diabetes mellitus among patient with diabetes mellitus

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DOI: <https://doi.org/10.33545/surgicalnursing.2023.v5.i2c.157>

Abstract

Background: Diabetes Mellitus is a chronic lifelong disease one has to live with. It is not possible for anyone to visit the doctor or hospital every now and then for rest of life. Therefore, it is important that the patient learns how to manage their disease themselves as much as possible. Diabetes mellitus is a silent disease and is now recognized as one of the fastest growing threats to public health in almost all countries of the world.

Objectives: To assess knowledge regarding diabetes mellitus among diabetes patient before and after administration of planned teaching programme.

Methods: A Quantitative research approach with pre-test post design was used. 60 diabetic patients were selected as a sample in the study using consecutive sampling technique. Structured questionnaires' was used. The structured teaching programme regarding diabetes mellitus was prepared by researcher which. The pre-test was conducted followed by planned teaching programme was administered and the post assessment was assessed immediately after the completion of planned teaching programme.

Results: Findings of the study indicate that structured teaching programme was effective in enhancing the knowledge as the findings indicate that the mean of the post-test knowledge score (16.13) was higher by pre-test knowledge score which was (5.27).

Conclusion: Planned Teaching programme was effective in enhancing the knowledge of diabetes mellitus regarding diabetic patients.

Keywords: Effectiveness, planned teaching programme, knowledge, diabetes mellitus, diabetic patients

Introduction

Diabetes Mellitus is a chronic lifelong disease one has to live with. It is not possible for anyone to visit the doctor or hospital every now and then for rest of life. Therefore, it is important that the patient learns how to manage their disease themselves as much as possible. It is important that they learn about the disease, its nature, course of events, approach in treatment of diabetes, selection of diet, role of exercise, diabetic discipline, use of drugs for diabetes, self-monitoring of blood and urine test, early recognition of complications of disease, and how to adjust treatment in day to day life and so on. Diabetes mellitus is a group of metabolic disorder arising either due to relative or absolute deficiency of a digestive hormone called insulin or inability or resistance of body cells to use the available insulin. Diabetes mellitus is a silent disease and is now recognized as one of the fastest growing threats to public health in almost all countries of the world. Every 5th person who suffers from diabetes in the world today is an Indian. Patients with Diabetes mellitus cannot be cured, but they can control it with regular exercise, diet, and drug. Regular and proper administration of drug can provide desired outcome, control diabetes, and prevent its complications. Undiagnosed or inadequately treated diabetes mellitus patients develop multiple complications leading to hospital admission. Diabetes mellitus in children adolescents, and old people can be controlled by, effective teaching and awareness programme about foot care, exercise, diet, its complications early detection and prevention. The risks of chronic complication such as eye involvement, renal, cardiovascular and diabetes foot also impose heavy economic burden on health care delivery system.

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Different types of foot problem such as ulcer and infection. Diabetes is becoming more common in the world. Every 21st second someone is diagnosed with diabetes. People with diabetic are 2 times more in background likely to develop blindness, 17 times more likely to develop kidney disease, 30-40 times more likely to undergo amputation, 2-4 times more likely to suffer a stroke than non-diabetics, women with diabetic are at 7 times more likely to have heart diseases. Heart diseases is more prone to silent attacks as they experience no pain association with an attack because of diabetic neuropathy. Diabetes is an 'ice berg disease. Although it increases in both the prevalence and incidence of non-insulin dependent diabetes occurred globally, they have been especially dramatic in societies. As a major epidemic of the 21st century diabetes mellitus is a threat to public health and is associated with increased physical, psychological and social morbidity and mortality if left untreated. In order to combat the above said ill effects, diabetic patients need to obtain adequate knowledge and favourable attitude towards management of condition.

Materials and Methods

The study was conducted in a selected government hospital in Delhi with approval of ethical committee of the hospital. The research design was pre-test-post-test design. The study participants comprised of 60 diabetic patients who were attending Medicine OPD using consecutive sampling technique. Diabetic patients who were willing to participate, who can read and write Hindi and English and present at the

period of data collection were included in the study. Written informed consent was obtained from all the study participants before starting the study. The study was conducted from December 2020. Assessment tool used was structured questionnaire. Knowledge was assessed initially and immediately after the completion of the planned teaching programme. The tool comprised of two sections including socio demographic variables and the structured questionnaire. The structured questionnaires consisted questions regarding assessment of knowledge of mothers regarding toilet training. The questionnaire had 21 questions. Each item in the part has 4 response choices and the respondents were asked to place a tick mark in the space provided against each preferred response for each question. The validated by 9 experts independently. Each correct response was given 1 mark and 0 mark for incorrect response.

Results and Discussion

A total 60 diabetic patients were included in this study. Mostly (72.18%) of diabetic patients were of age group 41-60 years old, Mostly (78.23%) belonged to an urban community, Mostly (64%) of the diabetic patients were female, Majorly (85%) of diabetic patients were Hindu by religion. Mostly (57.5%) of diabetic patients had no family history of diabetes mellitus in family, Mostly (66.33%) had been diabetic since 0-2 years. Mostly (71.67%) were having non-insulin dependent diabetes mellitus.

Table 1: Frequency and percentage of mothers in terms of level of knowledge scores of pre-test and post-test regarding planned teaching programme related to diabetes mellitus N=60

Level of Knowledge	Range of scores	Pre test		Post test	
		f	%	f	%
Good	15-21	0	0	39	65
Average	8-14	23	38.34	21	35
Poor	0-7	37	61.66	0	0

Maximum Score- 21, Minimum Score=00

The data presented in table 1 showed that in pre-test mostly all the diabetic patients (61.66%) were having poor knowledge and (38.34%) of diabetic patients were having average knowledge regarding diabetes mellitus. Whereas in post-test after administration of the planned teaching programme, majority of the diabetic patients (65%) were having good knowledge regarding diabetes mellitus and (35%) of diabetic patients were having average knowledge regarding diabetes mellitus.

Table 2: Mean, mean difference, standard deviation, standard error mean "t" value of pre-test and post-test knowledge score of diabetic patients regarding diabetes mellitus N=60

Score	Mean	Mean D	SD	S. EMD	't'	p value
Pre test	5.27	10.86	2.07	2.51	22.93	0.01*
Post test	16.13		4.58			

t (59)=1.671 * significant ($p \leq 0.05$)

The data presented in table 2 depicted that mean difference between pre-test knowledge score was (10.86), the post-test mean knowledge score was (16.13) and pre-test mean knowledge score was (5.27) and the computed t value was (1.671). The calculated t value (22.93) was found to be statistically significant at 0.05 level of significance and it indicated that there was a significant increase in the

knowledge of diabetic patient regarding diabetes mellitus.

The present study is consistent with Sangeeta M, where pre-test, majority patients (91.1%) had average Knowledge, (8.9%) had poor knowledge and none of them had good knowledge. In the post test, all the patients (100%) gained good knowledge. A statistically significantly difference was observed between the post test and pre-tests knowledge scores ($t = 1.960$; $p < 0.05$). In the present study 38.34% of diabetic patient had average knowledge and 61.66% of diabetic patient had poor knowledge regarding diabetes mellitus in pre-test whereas 65% of diabetic patients had good knowledge and 35% of diabetic patients had average knowledge regarding diabetes mellitus in post-test. In the present study the calculated t value (22.93) was found to be statistically significant at 0.05 level of significance and it indicated that there was a significant increase in the knowledge of diabetic patient regarding diabetes mellitus.

In the result of present study the mean knowledge post test score was (16.13±4.58) has significantly increased ($t=22.93$, $p < 0.05$) when compared to pre-test knowledge score was (5.27±2.07) is consistent with Ramai Palar where the mean knowledge score of the subjects in the post- test (40.94±3.61) has increased significantly ($t = 42.06$, $p < 0.05$) when compared to the pre- test knowledge score (15.16±6.61). The data shows in both studies the teaching

programme was effective in increasing the knowledge score of the subjects.

Conclusion

The mean post-test knowledge was higher than the mean pre-test knowledge score. Thus, the planned teaching programme was effective in enhancing the knowledge of the diabetic patients regarding diabetic mellitus.

Conflict of Interest

Not available

Financial Support

Not available

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How to Cite This Article

Biju A. The effectiveness of planned teaching programme on knowledge regarding self-management of diabetes mellitus among patient with diabetes mellitus. *International Journal of Advance Research in Medical Surgical Nursing.* 2023;5(2):184-186.

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