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A STUDY TO ASSESS THE EFFECTIVENESS OF DIABETIC EDUCATION ON KNOWLEDGE AND PRACTICE OF SELF- CARE MANAGEMENT AMONG PATIENTS WITH DIABETES MELLITUS AT ABHI SK HOSPITAL IN GOBI

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ABSTRACT

Aim of the study: A Study was conducted to evaluate the Knowledge and Practice of Self care management of diabetes mellitus at Abhi S.K. Hospital at Gobichettipalayam. **Methodology:** A quantitative evaluative approach with descriptive research design was used. Simple random sampling technique was used to select the samples. 30 samples were selected. Demographic variables were collected by routine follow up. The investigator used questionnaires to collect self-care management of diabetic patients. The data gathered were analysed by descriptive and inferential statistics method. **Results:** The result shows that mean post test score after the investigator used questionnaires to collect self-care management of diabetic patients. The data gathered were analysed by descriptive and inferential statistics method. Diabetic teaching was higher than the mean pre-test score, the post-test knowledge and practice score was 21. The obtained "t" value for comparison of knowledge score was 33.55 at 29 significant at ($p<0.05$) level. The calculated „t" value for comparison of knowledge on practice score was 36.49 at (29) significant at ($p<0.05$) level. The educational status has influenced on the post-test knowledge on person with Diabetes Mellitus. **Conclusion:** The conclusion is knowledge and practice has significant effect in management of diabetes mellitus after the diabetic education programme which improves the knowledge and Practice among patients.

KEYWORDS

Effectiveness, Knowledge, Self-care management and Diabetes mellitus.

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INTRODUCTION

Diabetes mellitus is a group of metabolic diseases in which a person has high blood sugar, either because the pancreas does not produce enough insulin or because cell do not respond to the insulin that is produced. The high blood sugar produces the classical symptoms of polyuria, polydipsia and

polyphagia. The prevalence of diabetes mellitus is increasing throughout the globe alarming rate with India being the diabetes capital of the world. Diabetes is now not a disease of the elderly as it was 30 years ago, more and more of diabetes mellitus at a very young age.

Diabetes self-management education is considered an integral component of care. The treatment of diabetes mellitus involves effectively manage diabetes, education about the management such as blood glucose monitoring, changes in dietary changes, physical activity, sleep pattern and problem solving strategies must be delivered to the patient. The aim of educational intervention is to manage hypoglycaemia and hypoglycaemia, maintain normal blood glucose level reduce the complications, gain skill in self-management or improve quality of life[1].

Background of the study

Jayalakshmi, 2019 conducted a study about a diabetic self-care management education is the process of providing knowledge and skill to perform self-care on a day to day basis of the person with diabetes mellitus, self-management education, medical, nutrition therapy, activity level, emotional, physical status on medications, then respond appropriately to those factors to achieve and maintain optimum glucose control.

According to the International Diabetes Fedaration, the global diabetes prevalence for the year 2013 was found to be 8.3%, affecting 382 million adults and it is projected to increase to 8.8% and 592 million adults by 2035.

Currently, India is a country with second highest number of people with type 2 Diabetes Mellitus. As per date for the year 2013, there were 65.1 million people with diabetes in India, which is predicted to rise up to 109 million by the year 2035[2].

Review of literature

Lasorella *et al* (2012) conducted a study to evaluate the long term feasibility of a high fibre diet composed exclusively of natural food stuffs and the efficacy of this diet in controlling blood glucose and incidence of hypoglycemic episodes in diabetic clients. The study concluded that a high fibre diet is feasible in the long term when compared with fibre diet, improves glycemic control and reduces the number of hypoglycemic events in diabetic patients.

Nield (2018) in his article said that a well-balanced meal plan must be determined for each individual where the individual has type 1 or type 2 diabetes. The basic diabetic meal planning include determining the persons activity, age, pattern, findings out what is eaten and when meals should be taken and composed of 55% to 60% carbohydrate, 15% to 20% protein, 30% or less fat and vitamin and mineral content in accordance with the recommended dietary allowance. Exercise lower the blood glucose by increasing the uptake of glucose by body muscle and by improving insulin utilization.

Statement of the problem

A study to assess the effectiveness of diabetic education on knowledge and practice of self- care management among patients with diabetes mellitus At Abhi SK Hospital in Gobi.

Objectives

To assess the knowledge and practice of self-care management of patients with diabetes mellitus

To determine the effectiveness between pre-test and post-test knowledge among the participants in self-care management of diabetic patients.

To educate the participants about Diabetes Mellitus, its causes, self -care management and diet patterns.

Hypothesis

H1 There is a significant improvement in the knowledge and practice after delivering the diabetic education regarding self-care management of patient with diabetes mellitus.

H0 There is No significant improvement in the knowledge and practice after delivering the diabetic education regarding self-care management of patient with diabetes mellitus.

MATERIAL AND METHODS

After getting permission from the hospital authorities, the researcher meet the patient in the hospital. The purpose and duration of study was explained to the patient. After obtaining the informed oral consents, the baseline variable was collected.

The study was conducted for a period of 15/12/2023 to 30/12/2023. The sample were selected by Simple

random sampling technique. The total size of the sample was 30. Patient who satisfied the inclusion criteria were selected for the study. First demographic data collected, in the pre- test on knowledge on practice regarding the self-care management among patients with diabetes mellitus was assessed by structural questionnaire. After Pre-test, diabetic education was given with the help of power point presentation. At the end of the session pamphlet was distributed for the patient those who have participated and non- participated in this group. The Patient were encouraged to clarify their doubts. Post-test was conducted on 7th day by using the same questionnaire to find out the effectiveness of diabetic education regarding self-care management of patients with diabetes mellitus.

Data Collection Tool

The tool used for data collection consisted of two parts:

SECTION A - Socio demographic variables

SECTION B - Questionnaire to assess the self - care management of diabetes mellitus.

SECTION – A

SOCIODEMOGRAPHIC VARIABLES

Socio demographic variables includes Name, Age, sex, Address, Education, occupation, marital status, Religion

SECTION – B

STRUCTURED QUESTIONNAIRE

It consists of 15 statements regarding diabetes and its self - care.

Ethical Considerations

Ensure voluntary participation with the right to withdraw at any time.

Maintain confidentiality and data protection.

Obtain approval from relevant ethical committees.

RESULTS

Section A: Frequency Distribution of Demographic variables

The study revealed that the distribution of participants regarding age group 30-40(7%) were between 41-50(33%) were between 51-60 years (40%) were between above 61(20%). Regarding type of family 17(57%) were males and 13(43%) were females. Regarding the gender 17(57%) were joint family and remaining 13(43%) were nuclear family. Regarding occupation 4(13%) were agriculture, 7(24%) were business 5(17%), were self - employed, 5(17%) were teacher 9(30%) were others. With regard to information obtained, 3(10%) from family members, 17(56%) from neighbours, 8(27%) from Mass media and 2(7%) from Health education. Regarding Type of food habits 5(16%) were vegetarian and 25(84%) were non vegetarian. With regarding to the type of diabetes mellitus 10(33%) were non - insulin dependent and 20(66%) were insulin dependent diabetes mellitus.

SECTION – II

Table No.2 shows that the mean score of knowledge in pre - test was 13 and in post - test was 21 and the calculated „t" value was 33.55 at (29) was significant at 0.05 levels. It reveals that there was significant difference between the pre-test and post-test knowledge. So the diabetic education has a significant effect in improving the knowledge of the patients with diabetes mellitus.

SECTION – III

Table No.3 shows that the mean score of knowledge on practice in pre-test was 12 and in post-test was 21 and the calculated „t" value was 36.49 at (29) was significant at 0.05 levels. It reveals that there was significant difference between the pre-test and post-test knowledge. So the diabetic education has a significant effect in improving the knowledge on practice of the patients with diabetes mellitus.

SECTION – IV

Association of Selected Demographic Variables with Pre-test Knowledge Score of patients with Diabetes mellitus

The association of pre-test of diabetes mellitus with the selected demographic variables was assessed. The obtained chi square value of educational status is 13.5 at 0.05 levels. It revealed that the educational status of diabetic patient had significant association with pre-test knowledge score of subjects. Other

demographic variables showed no significant association.

Discussion

The data analysis among the groups are pre-test mean score of knowledge is 13 and mean post-test was 21. The knowledge on practice score is pre-test is 12 and post-test was 21. It shows significant difference in pre-test and post-test values. It implies that there is an adequate knowledge and knowledge on practice of self- care management among persons with diabetes mellitus before diabetic education.

The obtained "t" value for knowledge 33.35 and knowledge on practice 36.39 at df (29) significant at 0.05 levels. This showed that there is a positive significant impact on the study conducted based on the objectives.

The demographic character namely the age, sex. Gender, occupation, type of family were associated with knowledge by using X2 test. It shows that their educational status has a significant relationship between the pre-test knowledge score among patients with diabetes mellitus. Among the two groups, the group I which has been intervened with the health education showed significant improved knowledge and positive impact when compared to the group which does not involved in the health education session.

Limitations

The size of the sample was small to draw generalization.

The sampling technique used was convenience sampling; it limits the generalization to larger population with similar characteristics.

Long term compliance like home care practice could not be assessed due to limited time.

The study includes only the ward patients in the Abhi S.K. Hospital, Gobi.

Table No.1: Scoring

S.No	Level of Knowledge	Score
1	Inadequate	0 - 7
2	Moderate	8 – 12
3	Adequate	13 – 15

Table No.2: Distribution of Statistical Value of Pre - test and post - test Knowledge of Score of Patients with Diabetes mellitus

S.No	Knowledge	Mean	S.D	't' value	Level of Significance
1	Pre - test	13	1.94	33.55	0.05
2	Post- test	21	1.41		

Table No.3: Distribution of statistical value of pre-test and post -test knowledge on practice score of patients with diabetes mellitus

S.No	Knowledge on Practice	Mean	S.D	„t'' value	Level of Significance
1	Pre-test	12	1.32	36.49	0.05
2	Post-test	21	1.42		

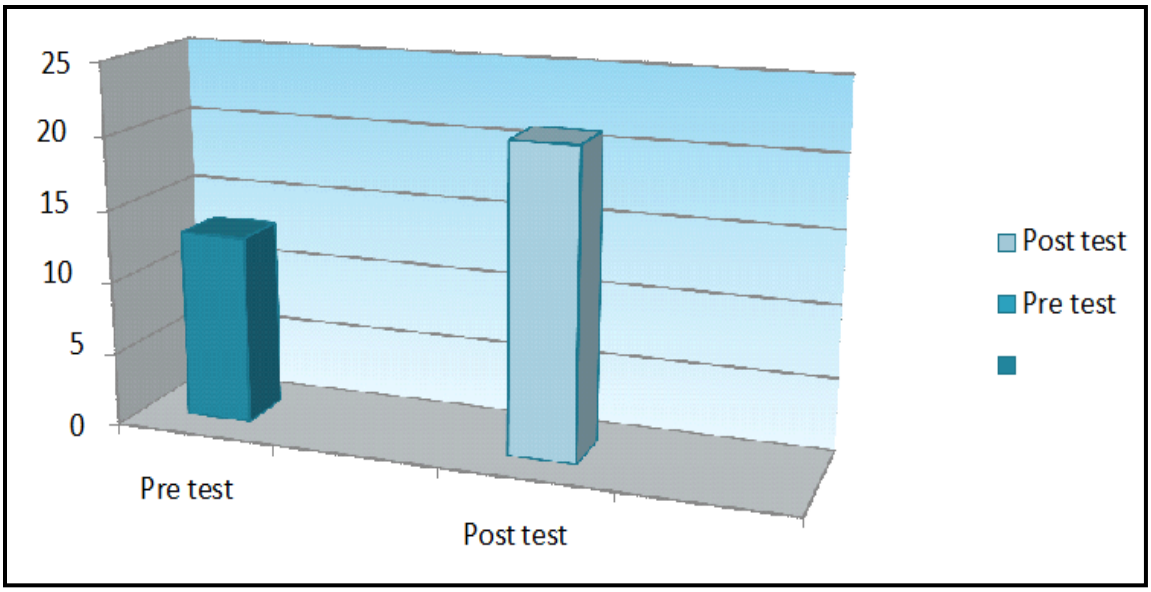

Figure No.1: Comparison of mean pre-test and post- test knowledge score of patients with diabetes mellitus

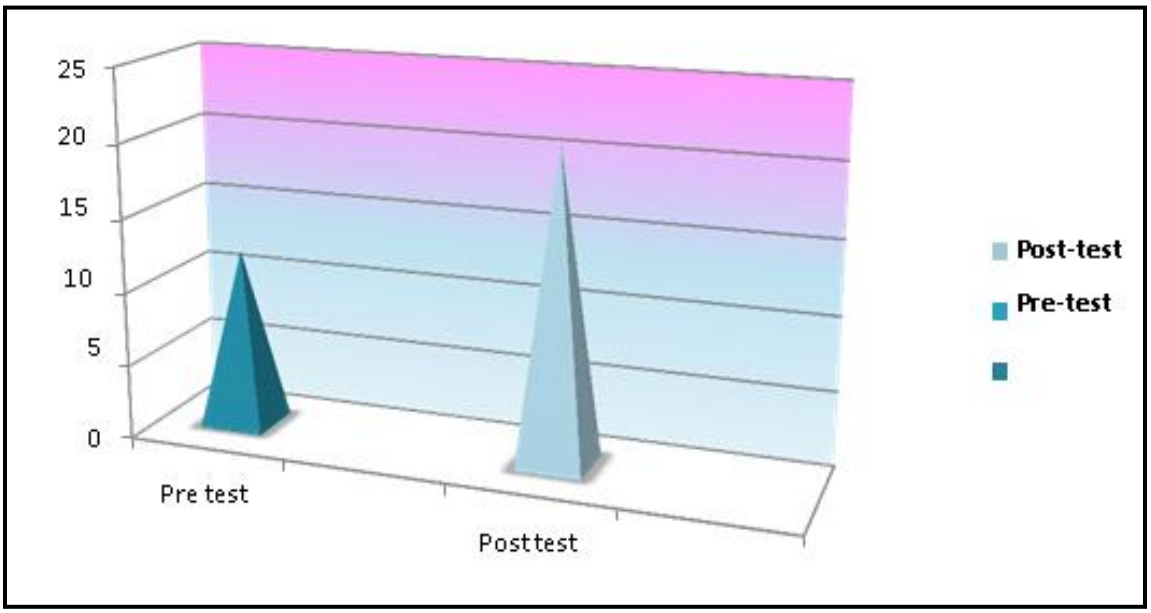

Figure No.2: Comparison of pre-test and post-test knowledge on practice score of patients with diabetes mellitus

CONCLUSION

The main objective of the study was to determine the practice and knowledge on self-care management of patients with diabetes mellitus. The results showed that there was a significant difference between Pre and Post-test levels of knowledge. The knowledge and knowledge on practice shows the significant effect in management of diabetes mellitus after the diabetic education program. The Post-test score of knowledge and practice was higher than the pre-test score. This indicates that the health education given on Self Care Management of Patients in Diabetes mellitus was effective.

SOURCE OF SUPPORT

The study would have received institutional approval and support ensuring access to participants and facilities needed for data collection.

CONFLICT OF INTEREST

None Declared

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