



Effectiveness of planned teaching program of dietary management on diabetes mellitus

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Abstract

Diabetes also predisposes to arterial disease, not least because it is often accompanied by hypertension, lipid disorders and obesity. Diabetes mellitus is a heterogeneous group of diseases characterized by chronic elevation of glucose in the blood. It arises because the body is unable to produce enough insulin for its own needs, either because of impaired insulin secretion, impaired insulin action, or both. Diabetes affects some 300 million people world-wide, and is on the increase. Chronic exposure to high blood glucose is a leading cause of renal failure, visual loss and a range of other types of tissue damage. The mean difference between pre-test and post-test knowledge score was -5.93. The obtained t value is 17.57 at 0.001 level of significance which is less than the table value at 0.05 level of significance. Therefore t value is found to be significant. Association of pre-test with the age of demographic variables calculated chi square (χ^2) value is 1.698 which is less (<) than the table value (11.57) at 6 degree of freedom and 0.05 level of significance. It proves that the null hypothesis is rejected and the research hypothesis is accepted. Hence there is a significant association between the knowledge and age. Planned teaching programme was effective to improve the knowledge of diabetic patient.

Keywords: knowledge, planned teaching programme, effectiveness, diabetes mellitus

1. Introduction

Diabetes also predisposes to arterial disease, not least because it is often accompanied by hypertension, lipid disorders and obesity. Many cases of diabetes and almost all of its unwanted long term consequences are potentially avoidable, but this will require intervention at a societal as well as at a medical level. Diabetes was considered a disease of the wealthy in ancient India, and was known as DM can be of three major types, based on etiology and clinical features. These are DM type 1 (T1DM), DM type 2 (T2DM), and gestational DM (GDM). In T1DM, there is absolute insulin deficiency due to the destruction of β cells in the pancreas by a cellular mediated autoimmune process. In T2DM, there is insulin resistance and relative insulin deficiency. GDM is any degree of glucose intolerance that is recognized during pregnancy. DM can arise from other diseases or due to drugs such as genetic syndromes, surgery, malnutrition, infections, and corticosteroids intake. Weight is lost because of rapid breakdown of fat and protein reserves to compensate for the loss of glucose and metabolic inefficiency due to lack of insulin action.

T2DM factors which can be irreversible such as age, genetic, race, and ethnicity or reversible such as diet, physical activity and smoking. Globally, T2DM is at present one of the most common diseases and its levels are progressively on the rise. It has been evaluated that around 366 million people worldwide or 8.3% in the age group of 20-79 years had T2DM in 2011. This figure is expected to rise to 552 million (9.9%) by 2030.

Material and Methods

Quantitative research approach with quasi experimental one group pre-test and post-test design was used. 60 patients were selected by non-probability purposive sampling techniques. Patient attending OPD in Pt. B. D. Sharma, P.G.I.M.S. Rohtak. The pre-test was done to establish the

reliability and to determine the language clarity and using split half method with assessed feasibility of the tool. Reliability of knowledge questionnaire used as a tool for the study. Structured knowledge questionnaire consist of 30 items regarding Diabetes mellitus. The items were developed as to cover the knowledge areas regarding dietary management of the Diabetes mellitus.

Data Collection Procedures

Patients were selected by non probability purposive sampling techniques attending opd in Pt. B. D. Sharma, P.G.I.M.S. Rohtak. On 1st day pre-test of knowledge was assessed by knowledge questionnaire. Day 2nd Planned teaching programme was given. Day 4th post-test of knowledge of patients regarding diabetes mellitus.

Result and Discussion

The result of current study showed that the patients have less knowledge regarding diabetes mellitus before administration of planned teaching programme, and it was increased after administration of planned teaching programme. Similarly the findings of current study was consistent with the study conducted by Abahussain NA, El-Zubier AG. (2005) [16]. A study was conducted on Diabetes knowledge among self-reported diabetic female teachers. The objective of this study was to determine the general knowledge of diabetes among female diabetic school teachers in Al-Khobar, Eastern Province of Saudi Arabia: A total of 91 female diabetic school teachers were interviewed in the School Health Clinic in Al-Khobar using a structured questionnaire. Their weight and height were measured and BMI was calculated. The results showed that understanding of diabetes was inadequate. Knowledge about symptoms of hypoglycemia was low. One-fourth (25%) of the sample of this study was using certain herbs for the treatment or management of diabetes mellitus. About three-fourths were

overweight and obese. The results showed a deficiency of knowledge on the general aspects of diabetes mellitus. An appropriate educational material was prepared in the form of leaflets, lectures and workshops.

The result of current study that After administration of planned teaching program 73% of the patient had adequate knowledge and 27% sample had moderate knowledge. The mean value of overall post-test knowledge score was 21.78 and the standard deviation was 2.82 The obtained 't' value for the knowledge was 17.57 which is greater than the table value at 0.05 level of significance. The findings shows that

there is a significant difference between the pre-test and the post-test score. So there is improvement in the knowledge of the diabetic patient.

Tables and Figures

Out of 61% of diabetic patient had inadequate knowledge and 31% had moderate knowledge and 2% had adequate knowledge in the pre-test After administration of planned teaching program 71% of diabetic patient had adequate knowledge and 13% of diabetic patient had moderate knowledge regarding dietary management

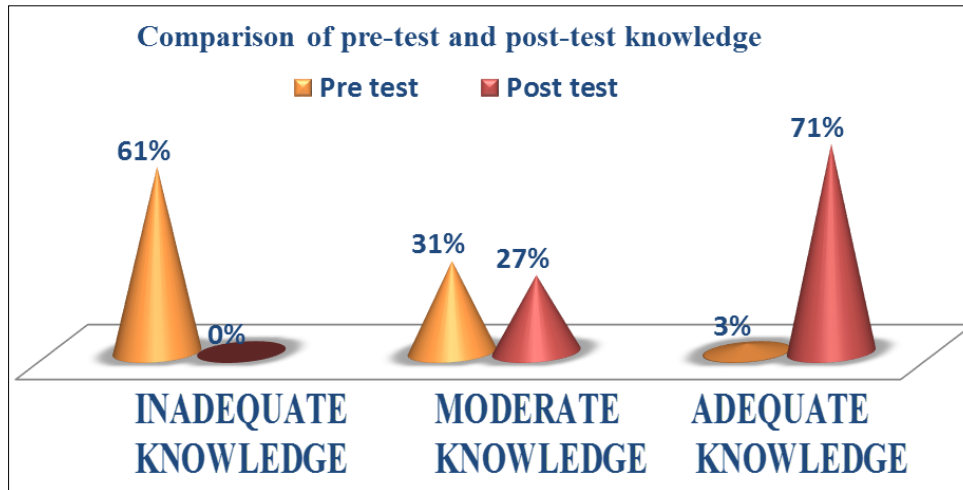


Fig 6: Showing comparison of pretest and post –test knowledge

Effectiveness of Planned Teaching Program on Knowledge

Table 2: Pre-test and Post-test knowledge score

	Pre test		Post test		Mean difference	T value	Df	Inference
	Mean	SD	Mean	SD				
Knowledge	15.85	3.5021	21.78	2.82	-5.93	17.57	57	S

Mean value of overall pre-test knowledge score was 15.85 and standard deviation is 3.5021 whereas the mean value of post-test knowledge score was 21.78 and standard deviation is 2.82. The mean difference between pre-test and post-test knowledge score was -5.93. The obtained t value is 17.57 at 0.001 level of significance which is less than the table value at 0.05 level of significance.

Association of the Post Test Knowledge with Selected Demographic Variables

Tables 3: Association of the Posttest Knowledge with Age

Variable (AGE)	Frequency	Inadequate Knowledge	Moderate	Adequate Knowledge	Calculated Value ()	Df=(c-1)(r-1)	Table value at 0.05 level of significance
Below 30 yr	14	0	4	12	3.899	6	11.57
40-45 yr	16	0	6	14			
46-56 yr	17	0	3	9			
57-67	13	0	2	5			
Total	60	0	15	40			

Calculated chi square (χ^2) value is 3.899 which is less (<) than the table value (11.57) at 6 degree of freedom and 0.05 level of significance. It proves that the null hypothesis is rejected and the research hypothesis is accepted. Hence there is a significant association between the knowledge and age.

Conclusion

The study concludes that planned teaching program was effective in increasing the knowledge of diabetic patient regarding Dietary management of diabetes mellitus. Diabetic patient had significant gain in knowledge regarding dietary management of diabetes mellitus. The written prepared material by the investigator in the form of planned

teaching helped the diabetic patient to improve their knowledge.

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