

“Effectiveness of Organized Instructional Module in Management of Hyperglycemia in Type 2 Diabetes Mellitus Patients at Tertiary Care Center”

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Abstract

High blood sugar level affect the people in multiple ways. Such as diabetic coma and other complications affecting eyes, kidney, nerves and heart. It's important to treat hyperglycaemia or to prevent the occurrence of hyperglycaemia in a type 2 diabetes mellitus patients. In present study aims to assess the “Effectiveness of organized instructional module in management of hyperglycemia in Type 2 diabetes mellitus patients at tertiary care center”. The objectives of the study were to assess the effectiveness of self-instructional module in prevention of hyperglycemia, and to find out the association between the pretest knowledge score of hyperglycemia management of Type 2 Diabetes Mellitus patient with their selected socio demographic variables. The research design is adopted for the study is one group pretest and posttest design. Hundred type2 diabetes mellitus patients admitted in Dhiraj general hospital selected as sample using purposive method. The data was collected using questionnaire. The result showed posttest score 13.24, with Standard Deviation 1.17 comparing with pre-test score 7.76, with standard deviation 1.35 the paired T value is 69.835, which is highly significant at 0.001.

Keywords: diabetes type 2, hyperglycemia management, organized instructional module

INTRODUCTION

Diabetes is a group of metabolic diseases characterized by hyperglycemia resulting from defects in insulin secretion, insulin action, or both. The chronic hyperglycemia of diabetes is associated with long-term damage, dysfunction, and failure of different organs, especially the eyes, kidneys, nerves, heart, and blood vessels. Acute, life-threatening consequences of uncontrolled diabetes are hyperglycemia with ketoacidosis or the non-kenotic hyperosmolar syndrome Long-term complications of diabetes include retinopathy with potential loss of vision; nephropathy leading to renal failure; peripheral neuropathy with risk of foot ulcers.¹

Glycemic management in type 2 diabetes mellitus has become increasingly complex and, to some extent, controversial, with a widening array of pharmacological agents now available mounting concerns about their potential adverse effects and new uncertainties regarding the benefits of intensive glycemic control on macro vascular complications. The cornerstone of type 2 diabetes treatment is healthy lifestyle, including increased physical activity and healthy diet.²

Although numerous reviews on the management of type 2 diabetes have been published in recent years, practitioners are often left without a clear pathway of therapy to follow. We developed the following consensus approach to the management of hyperglycaemia in the adult to help the patients in choosing the most appropriate interventions to prevent hyperglycemia.³

OBJECTIVES:

- 1) To assess the pretest knowledge score regarding the management of hyperglycemia in Type 2 Diabetes Mellitus patient.
- 2) To assess the effectiveness of organized instructional module in management of hyperglycemia in Type 2 diabetes patient.
- 3) To find out the association between the pretest knowledge score of hyperglycemia management of Type 2 Diabetes Mellitus patient with their selected socio demographic variables.

HYPOTHESIS:

H₁: There is a significant difference between pre-test and post-test knowledge score after administration of organized instructional module in management of hyperglycemia in Type 2 Diabetes Mellitus patients.

H₂: There will be a significant association between the pre-test knowledge score in management of hyperglycemia in Type 2 Diabetes Mellitus patients with the selected socio demographic variables

MATERIALS AND METHOD

Quantitative research method with one group pretest and posttest design is used in this study .The study conducted in Dhiraj hospital, Vadodara Gujarat. The source of the data were from the patients admitted with diabetes mellitus. The samples were selected based on inclusion and exclusion criteria using purposive sampling technique.100 patients were included in the study. The tool used for data collection is divided into two sections

SECTION 1: Demographic data-This section includes socio demographic variables such as age, gender, family income, marital status, dietary pattern, occupation that influencing the management of hyperglycemia diabetes mellitus type 2.

SECTION 2: Self structured identification questionnaire is used to assess the knowledge regarding management of diabetes mellitus type 2.>16 Good knowledge, 9-16 Moderate knowledge,>8 Low knowledge

Descriptive statistics: Frequency and percentage distribution was used to describe the socio-demographic data, the level of knowledge.

Inferential statistics. Paired t test to find out the effectiveness of self-instructional module on management of complication in type 2 diabetic patients .Chi - square was done to find the association between the attitude and selected socio-demographic variables.

RESULT

Section A: Distribution of sample according to socio-demographic variable.

Majority of the subjects 37% belongs to 45-50 age group and 30% of the sample belong to Rs 750-999 family income. Most of the subjects 83% were married and 64% belongs to vegetarian dietary pattern. More than half of the sample uses television as source of information. 56% belongs to clerical/shop/farm occupation

Section B:

- I. Effectiveness of self-instructional module related to management of hyperglycaemia in type 2 diabetes mellitus patients

n
=10
0

	MEANS	STANDARD DEVIATION	STANDARD ERROR	T VALUE	DF	SIGNIFICANT DIFFERENCE
PRETEST	7.76	1.35	0.136	69.835	99	S
POSTTEST	13.24	1.17	0.117			

It shows that t value of 69.835 with df 99, which is significant at p>0.005

Section C:

- II. Association between the level of knowledge and selected socio-demographic variables of Type 2 diabetes mellitus patients

n =100

Gender	Low knowledge	Moderate knowledge	Chi-square	Df	Level of significance
Male	34	11	7.83	1	S
Female	38	17			

It shows that association between gender and knowledge score was statistically significant at p> 0.005level using chi square test

DISCUSSION

In our study the findings of effectiveness of organized instructional module revealed that mean of pretest is 7.76 and posttest is 13.24, Standard Deviation of pretest is 1.35 and posttest is 1.17, Standard Error of pretest is 0.136 and posttest 0.117 and paired t value is 69.835, Difference is 99 which is significant at $p < 0.005$. This state that the hypothesis set for the study is accepted that the organized instructional module is effective in management of hyperglycemia in type 2 diabetic patients. This findings of the study was supported by a study conducted in Akilandapuram. A non-purposive descriptive observational clinical data. The result showed that, there was a significant difference between pretest and posttest level of knowledge regarding prevention of diabetes mellitus complication among diabetes. The obtain "t" value [26.52] was greater than the table value at 0.05 level of significant.⁴

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