

A Study to Assess the Effectiveness of Structured Teaching Programme on Knowledge Regarding Side Effects and Its Management of Anti-Diabetic Drugs among Patients with Diabetes Mellitus at Selected Hospital, Villupuram District

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ABSTRACT

The aim of the study was to assess the effectiveness of STP on knowledge regarding the side effects and its management of Anti-Diabetic Drugs among patients with Diabetes Mellitus.

Objectives: 1. To assess the pre and post test level of knowledge on side effects and its management of Anti-Diabetic Drugs. 2. To evaluate the effectiveness of structured Teaching programme 3. To find out the association between Post test level of knowledge with selected socio demographic variables of patients with diabetes Mellitus.

Method: pre experimental research design was adopted for the study. 50 samples were selected by using convenient sampling technique. The level of knowledge among patients was assessed by using self-structured knowledge questionnaires.

Result: the level of knowledge among Diabetic patients, in pre test 30(60%) of them had inadequate knowledge, 15 (30%) had moderate adequate knowledge and 5 (10%) of them had adequate knowledge. In post test, 10(20%) of them had inadequate knowledge, 18 (36%) had moderate adequate knowledge and 22 (44%) of them had adequate knowledge. In pre test the mean was 12.46 and the SD was 5.21 and in post test mean was 19.72 with the SD was 7.008. The paired t" test value was $t = 1.9845$ ($p=0.0264$) which is statistically significant at the level of $P<0.05$.

Conclusion: The study result shows that the STP improves the knowledge regarding the side

effects and its management of anti diabetic drugs among the diabetic clients.

Key Words: Diabetes Mellitus, side effects and its management, Anti-Diabetic Drugs

INTRODUCTION

Diabetes is a chronic disease that arises when the pancreas does not produce enough insulin or when the body cannot effectively use the insulin it produces. Insulin is a hormone made by the pancreas that enables cells to take in glucose from the blood and use it for energy.

Diabetes is one of the major health and development challenges of the 21st century. There are currently 371 million people living with diabetes and another 280 million are at high risk of developing the disease. Half a billion people are expected to be living with diabetes by 2030. Diabetes and its complications are largely preventable and there are proven affordable interventions available. Everyone concerned and everyone has a role to play in helping to turn the tide of diabetes to protect our future.

At present, India is considered as the diabetic capital of the world. There are approximately 3.5 crore diabetics in India, and this figure is expected to increase up to 5.2 crore by 2025. Every fifth patient visiting a consulting physician is a diabetic

and every seventh patient visiting a family physician is a diabetic. Keeping in view the alarming increase in the incidence and prevalence of diabetics in India, the World Health Organization (WHO) has declared India as the 'Diabetic Capital' of the world. Studies have shown that increasing patient knowledge regarding disease and its complications has significant benefits with regard to patient compliance to treatment and to decreasing complications associated with the disease. Considering this, we sought to quantify in a population of diabetics visiting our clinic, the level of knowledge with respect to different areas pertaining to the prevention and treatment of associated complications.

As India will rank first in diabetes now and will continue to do so in 2025, we must prevent the disease by various measures. Before setting the programmes, we should have ample data on the population's knowledge, attitude and practice (KAP) of diabetes. The study was conducted between the period of October 2018 to April 2019. Out of 300 patients who were given questionnaire, 238 patients were included for the analysis, rest were excluded due to various reasons. Nearly 50% knew the complications of diabetes. Dietary modifications were relied more than exercises among the interviewed subjects. Most of the lacunae in knowledge prevailed in drug therapy of diabetes. Insulin was not favoured by most of patients. An encouraging finding in our study was that most believed in self-care and ready to change. Consultation time given by their treating doctors was less than 5 minutes in nearly 50%. Foot care and education to prevent complications were least suggested by doctors.

Diabetes management is complex and difficult from the patients' perspective as well as providers and evidence exists that levels of care are suboptimal. Mainly the management includes life style modification, daily medication regimen, insulin administration, foot care and regular checkups which are complex and

uncomfortable in the view of patients. So far successful management clients with diabetes need adequate knowledge regarding diabetes mellitus, its complications and managements.

Risks, The main problem with Metformin is the risk of lactic acidosis and this is more common in patients with renal insufficiency, cardiovascular disease, peripheral vascular disease, liver disease, pulmonary disease and in those aged over 65 (see individual drug monograph for full list) The risk is negligible if the contra-indications are rigorously followed, but does mean that approximately 50% of people needing an oral hypoglycaemic would be excluded from using Metformin. It should be remembered that there is a temporary increased risk of lactic acidosis in situations where increased tissue hypoxia occurs, e.g. myocardial infarction (MI), infection or respiratory depression.

Insulin resistance may be present in non-diabetic individuals with a family history of non-insulin dependent diabetes mellitus (NIDDM), especially in African Americans. It has been suggested that improvement of insulin sensitivity in these high risk individuals may delay the development of NIDDM and its related cardiovascular complications. Interventions that may improve insulin sensitivity include lifestyle and dietary modification, weight reduction, exercise, and treatment with oral anti-diabetic agents.

Biguanides and Sulfonyl urea's are widely used for the treatment of NIDDM and have been used for the prevention of diabetes in non-diabetic patients. Long term prospective randomized studies of the cardiovascular effects of these anti-diabetic agents in non-diabetic individuals with insulin resistance are lacking.

In this prospective randomized double blind study, the long term effects of Glipizide and Metformin on multiple cardiovascular variables, metabolic parameters, and lipid profile in non-diabetic individuals with insulin resistance and a family history of NIDDM were studied.

STATEMENT OF THE PROBLEM

“A Study to assess the effectiveness of structured teaching programme on knowledge regarding side effects and its management of anti-Diabetic drugs among patients with diabetes Mellitus at selected Hospital, Villupuram district

OBJECTIVES

- To assess the pre and post test level of knowledge on side effects and its management of Anti-Diabetic Drugs among patients with diabetes Mellitus.
- To evaluate the effectiveness of structured Teaching programme on knowledge regarding side effects and its management of Anti-Diabetic Drugs among patients with diabetes Mellitus.
- To find out the association between Post test level of knowledge on side effects and its management of Anti-Diabetic Drugs with selected socio demographic variables of patients with diabetes Mellitus.

HYPOTHESIS

H₁: There will be significant increase in post test knowledge scores than the pre test knowledge score on side effects and its management of Anti-Diabetic Drugs among patients with diabetes Mellitus

H₂: There will be significant association between the post test level of knowledge on side effects and its management of Anti-Diabetic drugs with selected Socio-Demographic variables of patients with diabetes Mellitus

MATERIAL AND METHOD

A pre Experimental one group pre and post test research group was selected for the study. The study was conducted at E.S Hospital, Villupuram. 50 samples were selected by using convenient sampling technique. The knowledge of patients was assessed by using self structured knowledge questionnaires. On the first day of data collection the pre test knowledge was assessed after pre test assessment structured teaching programme was administered for the patients. The post test knowledge was assessed on seventh day by using the same self structured questionnaires.

RESULT AND DISCUSSION

Assessment of pre and post test knowledge regarding side effects and its management of Anti-diabetic drugs among patients with diabetes mellitus.

Table 1.1: Frequency and Percentage Distribution of level of pre and post test knowledge regarding side effects and its management of Anti-diabetic drugs among patients with diabetes mellitus. (n=50)

S.No.	Level of Knowledge	Pre-test		Post-test	
		n	(%)	n	(%)
1	Adequate knowledge	5	10%	22	44%
2.	Moderate knowledge	15	30%	18	36%
3.	Inadequate knowledge	30	60%	10	20%

The table 1.1 reveals the level of knowledge among Diabetic patients, in pre test 30(60%) of them had inadequate knowledge, 15 (30%) had moderate adequate knowledge and 5 (10%) of them had adequate knowledge. In post test, 10(20%) of them had inadequate knowledge, 18 (36%) had moderate adequate knowledge and 22 (44%) of them had adequate knowledge.

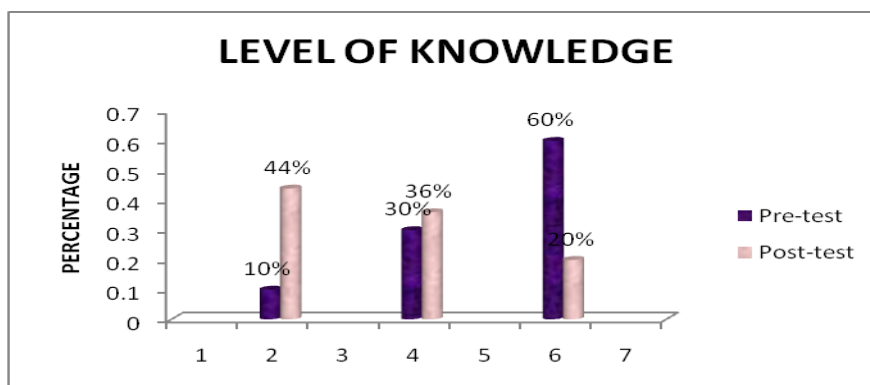


Figure-1.1: percentage wise distribution of pre and post test level of knowledge among diabetic patients

Effectiveness of structured teaching programme among the diabetic patients.

Table 1.2: Effectiveness of structured teaching programme among the diabetic patients n=50

S.No.	Measurements	Pre-test	Post-test
1	Mean	12.46	19.72
2.	S.D	5.215	7.008
Paired 't' test value		t = 1.9845 df=49 p = 0.0264	

p<0.05 level of significance.

Table-1.2 Shows In pre test the mean was 12.46 and the SD was 5.21 and in post test mean was 19.72 with the SD was 7.008. The paired t" test value was t = 1.9845 (p=0.0264) which is statistically significant at the level of P<0.05.

DISCUSSION

The first objective of the study To assess the pre and post test level of knowledge on side effects and its management of Anti-Diabetic Drugs among patients with diabetes Mellitus.

The pre test level of knowledge among Diabetic patients shows, 30(60%) of them had inadequate knowledge, 15 (30%) had moderate adequate knowledge and 5 (10%) of them had adequate knowledge.

The post test level of knowledge among diabetic patients shows 10(20%) of them had inadequate knowledge, 18 (36%) had moderate adequate knowledge and 22 (44%) of them had adequate knowledge.

The second objective of the study is To evaluate the effectiveness of structured Teaching programme on knowledge regarding side effects and its management of Anti-Diabetic Drugs among patients with diabetes Mellitus.

In pre test the mean was 12.46 and the SD was 5.21 and in post test mean was 19.72 with the SD was 7.008. The paired t" test value was t = 1.9845 (p=0.0264) which is statistically significant at the level of P<0.05.

The third objective of the study is To find out the association between Post test level of knowledge on side effects and its management of Anti-Diabetic Drugs with

selected socio demographic variables of patients with diabetes Mellitus.

In this study, there is no significant association between the post test level of knowledge with selected demographic variables. Hence the hypothesis H₂ is rejected.

CONCLUSION

The study results shows that pre test the mean was 12.46 and the SD was 5.21 and in post test mean was 19.72 with the SD was 7.008. The paired t" test value was t = 1.9845 (p=0.0264) which is statistically significant at the level of P<0.05. hence it indicates that structured teaching programme improves the knowledge level. The study reveals that structured teaching programme is effective in improving the knowledge level among diabetic clients.

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