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To Evaluate The Effectiveness Of Stp On Knowledge Regarding Prevention Of Complication Of Diabetes Mellitus Among Patients With Diabetes

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ABSTRACT

Background:

Diabetes mellitus is a chronic metabolic disorder with rising global and national prevalence. Lack of awareness and inadequate self-care often result in severe complications such as cardiovascular disease, nephropathy, retinopathy, neuropathy, and foot ulcers. Structured Teaching Programmes (STPs) have been proven effective in improving patient knowledge and preventive practices, especially in underserved regions like Bihar.

Objectives:

The study aimed to (1) assess the pre- and post-test knowledge of patients regarding prevention of complications of diabetes mellitus, (2) evaluate the effectiveness of a Structured Teaching Programme (STP), and (3) determine the association of knowledge levels with selected demographic variables

Methodology:

A quasi-experimental one-group pre-test post-test design was adopted. Sixty adult patients with Type-II diabetes mellitus attending the OPD at NMCH, Sasaram, were selected through purposive sampling. Data were collected using a structured questionnaire and analyzed using descriptive and inferential statistics. A quasi-experimental one-group pre-test post-test design was adopted. Sixty adult patients with Type-II diabetes mellitus attending the OPD at NMCH, Sasaram, were selected through purposive sampling. Data were collected using a structured questionnaire and analyzed using descriptive and inferential statistics.

Result:

In the pre-test, only 20% of participants demonstrated good knowledge, while 18.3% had poor knowledge. Post-test results showed significant improvement, with 63.3% achieving good knowledge and none remaining in the poor category. The mean knowledge score increased from 39.23 ± 4.45 to 59.22 ± 3.88 ($t = 10.45$, $p < 0.001$). Educational qualification and duration of diabetes were significantly associated with post-test knowledge.

Recommendation:

Structured Teaching Programmes should be integrated into routine outpatient care, particularly in rural and semi-urban healthcare settings. Nurses should be trained and empowered to lead patient education sessions to reduce diabetes-related complications. Structured Teaching Programmes should be integrated into routine outpatient care, particularly in rural and semi-urban healthcare settings. Nurses should be trained and empowered to lead patient education sessions to reduce diabetes-related complications.

Conclusion:

The study confirms that STPs are simple, cost-effective, and highly effective in improving knowledge and preventive practices among diabetic patients. Their implementation can play a vital role in reducing the burden of diabetes complications and enhancing long-term health outcomes.

Keywords: Diabetes mellitus, Structured Teaching Programme, Knowledge, Prevention, Complications.

INTRODUCTION

Diabetes Mellitus (DM) is a chronic, metabolic disorder characterized by persistent hyperglycemia resulting from defects in insulin secretion, insulin action, or both. It is a major public health problem with increasing prevalence worldwide. According to the International Diabetes Federation (IDF), as of 2021, over 537 million adults aged 20–79 years are living with diabetes globally, and this figure is expected to rise to 643 million by 2030 and 783 million by 2045.

India, often referred to as the 'Diabetes Capital of the World,' has more than 77 million diagnosed diabetic individuals. This growing burden is largely due to lifestyle changes, urbanization, dietary habits, physical inactivity, stress, and genetic predisposition. Among the Indian states, Bihar represents a unique challenge due to its rural majority, poor healthcare infrastructure, and low literacy rates, leading to under-diagnosis, poor glycemic control, and a lack of awareness regarding diabetes prevention.

Despite being preventable and manageable, diabetes continues to result in significant morbidity and mortality due to complications such as cardiovascular diseases, nephropathy, retinopathy, neuropathy, and foot ulcers. Most of these complications arise due to lack of awareness and inadequate self-care practices among patients.

In this context, patient education plays a pivotal role. Structured Teaching Programmes (STPs) have been shown to significantly improve the knowledge, attitude, and practices (KAP) of patients. These programs, when delivered in outpatient settings, can bridge the information gap and empower patients to take control of their health.

This study is based on the pressing need to evaluate the effectiveness of such STPs, particularly in regions like Sasaram, Bihar, where awareness and literacy about diabetes remain low. The study focuses on patients diagnosed with Type-II Diabetes Mellitus admitted to the outpatient department (OPD) of Narayan Medical College and Hospital (NMCH), Sasaram.

PROBLEM STATEMENT

A quasi experimental study to evaluate the effectiveness of STP on knowledge regarding prevention of diabetes mellitus among patients with diabetes mellitus admitted at NMCH, SASARAM in BIHAR.

OBJECTIVES

1. To assess the pre-test and post-test level of knowledge regarding prevention of diabetes mellitus among patients with diabetes mellitus admitted at NMCH, Sasaram.
2. To evaluate the effectiveness of the Structured Teaching Programme (STP) on knowledge regarding prevention of diabetes mellitus among patients with diabetes mellitus.

MATERIALS AND METHODS

Material and Methods:

Research approaches

The research approaches was quantitative research approach.

Research design-

Research design is typical descriptive research design.

Research setting –

The study was conducted at NMCH, JAMUHA, ROHTAS.

Sample technique -

Non-Probability purposive sampling technique

Target population-

The sample consist of age between 35 to 55 years in NMCH, JAMUHAR, Rohtas, Bihar who fulfils the inclusion criteria.

Sample size-

Number of sample size is 60.

Inclusion criteria-

- Age between 35 to 55 years.
- Patients who were able to speak and understand Hindi or English.
- Patients who were diagnosed with diabetes for one month.
- Patients were willing to participate in the study.
- Patients who are attending medicine OPD.

Exclusion criteria-

Patients who were-

- Mental unsound
- Sick
- Admitted to the ward.

MAJOR FINDINGS OF THE STUDY

S. No.	Demographic Variable	Options	Good (f)	Moderate (f)	Poor (f)	χ^2 Value	P-value	Result
1	Age	30–40	10	6	2			
		41–50	12	6	2			
		51–60	8	5	2			
		61–65	3	2	2	6.843	0.077	Not Significant
2	Gender	Male	20	8	4			
		Female	18	11	3	2.143	0.143	Not Significant
3	Religion	Hindu	30	10	2			
		Muslim	5	4	1			
		Christian	2	2	1			
		Other	1	3	2	3.972	0.264	Not Significant
4	Education Level	No formal	1	3	2			
		Primary	3	5	2			
		Secondary	6	10	2			
		Graduate	12	6	2			
		Post-Graduate	4	2	0	8.302	0.040	Significant
5	Occupation	Laborer	4	4	2			
		Farmer	3	4	1			
		Private Job	10	6	4			
		Govt Job	12	4	0			
		None	9	1	0	5.991	0.199	Not Significant
6	Marital Status	Married	30	12	6			
		Unmarried	6	6	2	2.701	0.258	Not Significant

S. No.	Demographic Variable	Options	Good (f)	Moderate (f)	Poor (f)	χ^2 Value	P-value	Result
7	Residence	Rural	20	10	5			
		Urban	8	4	3			
		Semi-urban	10	5	1	7.115	0.068	Not Significant
8	Family History	Yes	28	7	3			
		No	10	8	4	3.611	0.057	Not Significant
9	Duration of Diabetes	<1 year	6	3	1			
		1–5 years	20	8	2			
		>5 years	12	8	2	6.322	0.042	Significant

CONCLUSION

The findings of this study strongly reinforce the importance of Structured Teaching Programmes (STP) in the management and prevention of diabetes mellitus. Diabetes is a chronic condition that requires not only medical attention but also a well-informed and proactive patient to manage the disease effectively. Through this study, it became evident that knowledge is a critical driver of health behavior, especially in chronic conditions like diabetes where long-term lifestyle changes and adherence to preventive practices are essential.

The analysis from the pre-test and post-test results clearly showed a statistically significant improvement in knowledge following the administration of the STP. The participants' mean knowledge score increased by nearly 20 points. Moreover, poor practice behaviors were completely eliminated in the post-test, showing not just a theoretical understanding but also a behavioral shift.

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