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A STUDY TO EVALUATE THE EFFECTIVENESS OF STRUCTURED TEACHING PROGRAMME ON KNOWLEDGE REGARDING LIFE STYLE MODIFICATION OF DIABETIC MELLITUS AMONG DIABETIC MELLITUS PATIENTS IN SELECTED HOSPITAL AT GUJARAT

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ABSTRACT

Background

Diabetes Mellitus is one of the major non-communicable diseases affecting millions of people worldwide. Lifestyle modification plays an essential role in controlling blood glucose levels and preventing complications. Many diabetic patients have inadequate knowledge regarding diet, exercise, medication adherence, stress management, and self-care practices. Structured teaching programmes are effective educational interventions that improve awareness and promote healthy lifestyle behaviors among diabetic patients. Previous studies have shown significant improvement in knowledge after educational interventions among diabetic patients.

Objectives

1. To assess the pre-test knowledge regarding lifestyle modification among diabetic mellitus patients.
2. To evaluate the effectiveness of structured teaching programme on knowledge regarding lifestyle modification among diabetic mellitus patients.
3. To find out the association between post-test knowledge scores and selected demographic variables.

Methodology

A quantitative research approach with pre-experimental one-group pre-test post-test design was adopted for the study. The study was conducted among 100 diabetic mellitus patients in a selected hospital at Gujarat. Non-probability convenient sampling technique was used for sample selection. Structured knowledge questionnaire was used to assess the knowledge regarding lifestyle modification. The structured teaching programme was administered after the pre-test, and post-test was conducted after seven days.

Results

The findings revealed that in the pre-test, majority of diabetic patients had inadequate knowledge regarding lifestyle modification. After implementation of the structured teaching programme, the post-test knowledge scores improved significantly. The mean pre-test knowledge score was 11.42 ± 3.14 , whereas the post-test mean score increased to 23.86 ± 2.48 . The calculated paired 't' value was 24.62, which was statistically significant at $p < 0.05$ level.

Conclusion

The study concluded that the structured teaching programme was highly effective in improving knowledge regarding lifestyle modification among diabetic mellitus patients. Educational interventions should be incorporated routinely in diabetic care services to improve patient outcomes and prevent complications.

Keywords: Diabetes Mellitus, Lifestyle Modification, Structured Teaching Programme, Knowledge, Diabetic Patients.

INTRODUCTION

Diabetes Mellitus is a chronic metabolic disorder characterized by elevated blood glucose levels resulting from defects in insulin secretion, insulin action, or both. It is a major public health concern globally and contributes significantly to morbidity and mortality. India is considered the "Diabetes Capital of the World" due to the rapidly increasing number of diabetic patients.

Lifestyle modification is considered the cornerstone in the management of diabetes mellitus. Proper diet, regular exercise, weight control, medication adherence, stress reduction, and avoidance of smoking and alcohol are important components of diabetic management. Lack of awareness regarding lifestyle modification leads to poor glycemic control and complications such as neuropathy, nephropathy, retinopathy, cardiovascular disease, and diabetic foot ulcers.

Educational interventions such as structured teaching programmes can improve patients' understanding and help them adopt healthy practices. Studies conducted in India demonstrated significant improvement in knowledge and self-care practices after structured educational programmes among diabetic patients.

NEED FOR THE STUDY

Diabetes Mellitus is increasing rapidly due to sedentary lifestyle, unhealthy dietary habits, obesity, stress, and lack of physical activity. Many diabetic patients lack adequate knowledge regarding disease management and lifestyle changes. Improper management leads to severe complications and increased healthcare burden.

Structured teaching programmes are cost-effective and beneficial interventions that can improve awareness and promote self-management behaviors among diabetic patients. Therefore, the investigator felt the need to conduct the present study to evaluate the effectiveness of structured teaching programme on knowledge regarding lifestyle modification among diabetic mellitus patients.

STATEMENT OF THE PROBLEM

“A study to evaluate the effectiveness of structured teaching programme on knowledge regarding life style modification of diabetic mellitus among diabetic mellitus patients in selected hospital at Gujarat.”

OBJECTIVES OF THE STUDY

1. To assess the pre-test knowledge regarding lifestyle modification among diabetic mellitus patients.
2. To evaluate the effectiveness of structured teaching programme on knowledge regarding lifestyle modification among diabetic mellitus patients.
3. To determine the association between post-test knowledge scores and selected demographic variables.

HYPOTHESIS

H1

There will be a significant difference between pre-test and post-test knowledge scores regarding lifestyle modification among diabetic mellitus patients.

H2

There will be a significant association between post-test knowledge scores and selected demographic variables.

RESEARCH METHODOLOGY

Research Approach

The present study was conducted by using a quantitative research approach to evaluate the effectiveness of a structured teaching programme on knowledge regarding lifestyle modification among diabetic mellitus patients.

Research Design

A pre-experimental one group pre-test post-test research design was adopted for the study. This design helped the investigator to assess the knowledge level of diabetic mellitus patients before and after administration of the structured teaching programme.

Research Setting

The study was conducted in a selected hospital at Gujarat.

Population

The target population of the study consisted of all diabetic mellitus patients. The accessible population included diabetic patients who were available during the period of data collection in the selected hospital.

Sample Size

The sample size of the study consisted of 100 diabetic mellitus patients.

Sampling Technique

Non-probability convenient sampling technique was used for selecting the samples for the study.

Variables of the Study

Independent Variable

The independent variable in the study was the structured teaching programme regarding lifestyle modification.

Dependent Variable

The dependent variable of the study was the knowledge regarding lifestyle modification among diabetic mellitus patients.

Demographic Variables

The demographic variables included age, gender, educational status, occupation, duration of illness, dietary pattern, family history of diabetes, and area of residence.

Sampling Criteria

Inclusion Criteria

The study included diabetic mellitus patients who:

- Were willing to participate in the study
- Were available during the period of data collection
- Could understand Gujarati, Hindi, or English

Exclusion Criteria

The study excluded diabetic mellitus patients who:

- Were critically ill
- Were unwilling to participate in the study

Development of Tool

The research tool used for data collection was a structured knowledge questionnaire prepared by the investigator to assess knowledge regarding lifestyle modification among diabetic mellitus patients.

Description of the Tool

Section A: Demographic Variables

This section included items related to:

- Age
- Gender
- Educational status
- Occupation
- Duration of illness
- Dietary pattern
- Family history of diabetes
- Area of residence

Section B: Structured Knowledge Questionnaire

This section consisted of questions related to:

- Meaning of diabetes mellitus
- Causes and symptoms
- Diet management
- Exercise
- Medication adherence
- Foot care
- Stress management
- Prevention of complications

Validity of the Tool

The tool was validated by experts from the fields of Medical Surgical Nursing, Community Health Nursing, and Medicine. Necessary modifications were made according to the suggestions given by the experts.

Reliability of the Tool

Reliability of the tool was established by using the split-half method and Karl Pearson's correlation coefficient formula. The tool was found to be reliable for conducting the study.

Pilot Study

A pilot study was conducted on 10 diabetic mellitus patients to assess the feasibility and practicability of the study.

Ethical Consideration

Formal permission was obtained from the concerned hospital authority before conducting the study. Informed consent was obtained from all participants after explaining the purpose of the study. Confidentiality and anonymity of the participants were maintained throughout the study.

Data Collection Procedure

The pre-test was conducted using the structured knowledge questionnaire. After the pre-test, the structured teaching programme regarding lifestyle modification was administered to the participants. The post-test was conducted after seven days using the same questionnaire to evaluate the effectiveness of the teaching programme.

Plan for Data Analysis

The collected data were organized, tabulated, and analyzed by using descriptive and inferential statistics.

Descriptive Statistics

- Frequency
- Percentage
- Mean
- Standard deviation

Inferential Statistics

- Paired 't' test
- Chi-square test

These statistical methods were used to determine the effectiveness of the structured teaching programme and the association between post-test knowledge scores and selected demographic variables.

DESCRIPTION OF THE TOOL

The tool consisted of two sections:

Section A

Demographic variables including:

- Age
- Gender
- Educational status
- Occupation
- Duration of illness
- Family history
- Dietary pattern

Section B

Structured questionnaire regarding:

- Meaning of diabetes mellitus
- Causes and symptoms
- Diet management
- Exercise
- Medication adherence
- Foot care
- Stress management
- Prevention of complications

RESULTS

Table 1: Distribution of Samples According to Knowledge Level

Knowledge Level	Pre-test Frequency	Post-test Frequency
Inadequate Knowledge	68	04
Moderate Knowledge	24	20
Adequate Knowledge	08	76

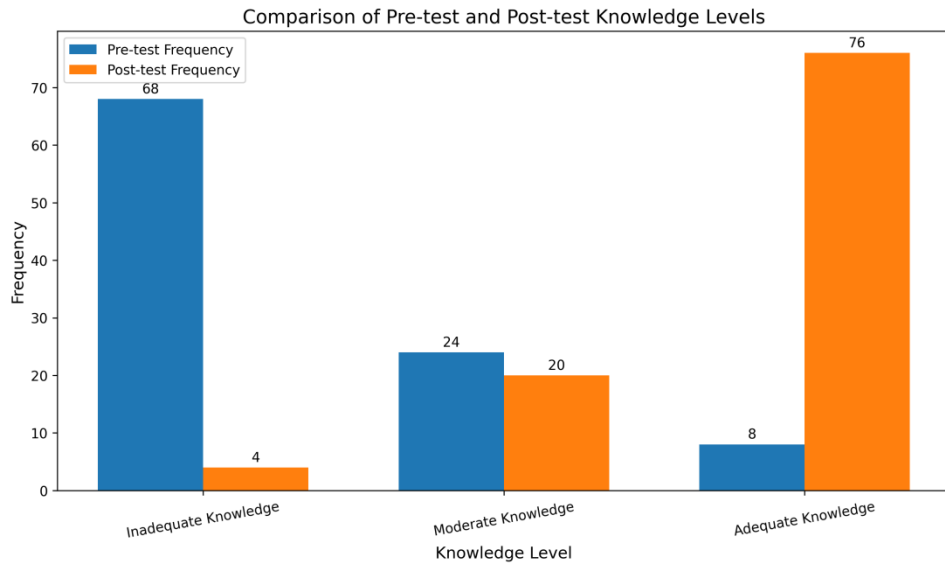
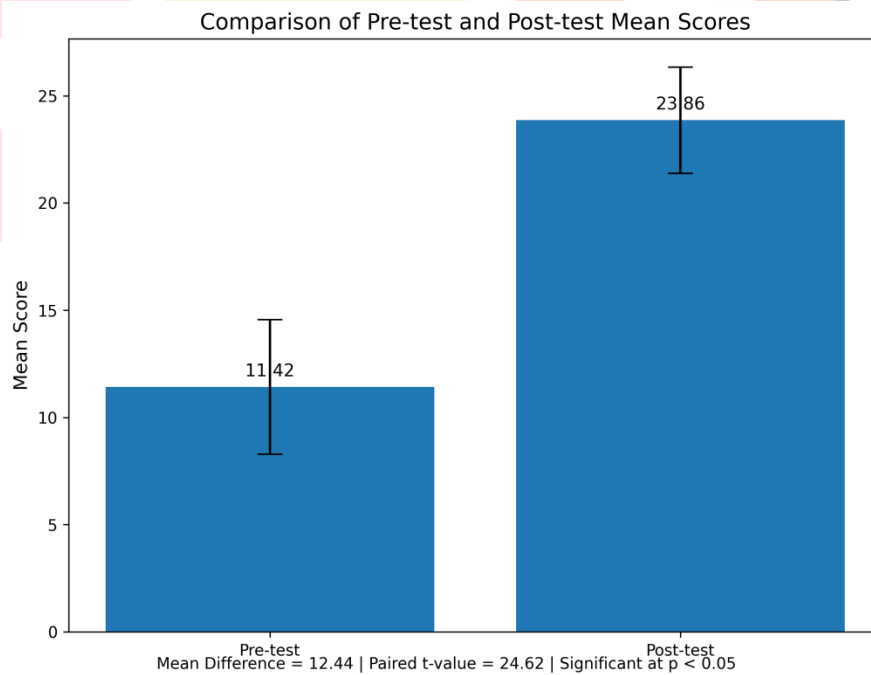


Table 2: Comparison of Pre-test and Post-test Knowledge Scores

Test	Mean	Standard Deviation	Mean Difference	Paired 't' Value	Significance
Pre-test	11.42	3.14	12.44	24.62	Significant
Post-test	23.86	2.48			p<0.05

The above table indicates that the post-test mean knowledge score was higher than the pre-test mean score. The calculated paired 't' value was significant at 0.05 level, indicating that the structured teaching programme was effective.



DISCUSSION

The study findings revealed that diabetic patients had inadequate knowledge regarding lifestyle modification before administration of the structured teaching programme. After the educational intervention, there was significant improvement in knowledge scores.

These findings are consistent with previous studies conducted among diabetic patients which reported that structured educational programmes effectively improved awareness and self-care management.

Educational interventions play an important role in promoting healthy behaviors and preventing complications among diabetic patients.

CONCLUSION

The present study concluded that the structured teaching programme was effective in improving knowledge regarding lifestyle modification among diabetic mellitus patients. Patient education should be integrated into routine diabetic management to encourage healthy lifestyle practices and improve quality of life.

RECOMMENDATIONS

1. Similar studies can be conducted with larger sample size.
2. Comparative studies can be conducted between urban and rural populations.
3. Longitudinal studies can be conducted to assess long-term retention of knowledge.
4. Educational booklets and audiovisual aids can be developed for diabetic patients.

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