

EFFECTIVENESS OF NURSE LED DIABETES MANAGEMENT PROGRAMME ON QUALITY OF LIFE AMONG PATIENTS WITH TYPE II DIABETES MELLITUS

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ABSTRACT

Background: Diabetes mellitus is a major global health challenge, with Type II Diabetes Mellitus (T2DM) significantly impacting patients' quality of life and clinical outcomes. This study evaluates the effectiveness of a **Nurse-Led Diabetes Management Programme (NLDMP)** in improving quality of life among patients with T2DM.

Methods: A **true experimental pretest-posttest control group design** was adopted. A total of **200 participants (100 in the control group and 100 in the experimental group)** were selected through stratified random sampling. The intervention involved an **eight-day structured nurse-led program**, which included **education on diabetes management, Rajyoga meditation, mindfulness training, and follow-up monitoring through telephonic contact and volunteer support**. Data were collected using standardized tools, including the **WHOQOL-BREF scale for quality of life assessment**.

Results: The findings showed a significant improvement in quality of life in the experimental group. The posttest mean score of Quality of life is 103.2 and SD 24.26 which is greater than the pretest the mean 51.3 and SD 5.95 of Experimental group. And the t –value 6.35 is found to be greater than the tabulated value at the level of significance 0.05 and thus the research hypothesis is accepted. The post test mean score of Quality of life is 61.9 and SD 22.90 and the pretest the mean 60 and SD 22.32 of Control group. And the t –value 1.43 is found to be lesser than the tabulated value at the level of significance 0.05 and thus comparing the post test score experimental and control group there is no significant difference at the level of significance 0.05 and, the research hypothesis is not accepted.

Conclusion: The finding of the study concluded that nurse led diabetes management programme is an effective, feasible, and structured intervention for improving quality of life in patients with type-II diabetes mellitus. The results advocate for integrating nurse-led diabetes management programs into routine healthcare practice to enhance diabetes care, self-management, and patient well-being.

Keywords: Type II Diabetes Mellitus, Nurse-Led Diabetes Management Programme, Quality of Life, Rajyoga Meditation, Mindfulness.

INTRODUCTION

Diabetes mellitus, particularly Type II diabetes, is a significant global health concern that affects millions of people, leading to severe complications if not properly managed. The increasing prevalence of this chronic disease poses challenges not only for healthcare systems but also for individuals striving to maintain a good quality of life. Effective diabetes management requires a comprehensive approach, incorporating medical treatment, lifestyle modifications, and continuous patient education.

Traditionally, diabetes management has been physician-led; however, the role of nurses in chronic disease care has gained recognition for its effectiveness in improving patient outcomes. A nurse-led diabetes management program focuses on patient-centered care, empowering individuals with knowledge, self-care strategies, and ongoing support to enhance adherence to treatment and lifestyle changes. Nurses, through regular monitoring and personalized interventions, can significantly impact patients' overall well-being.

Quality of life among patients with Type II diabetes is often compromised due to factors such as disease-related complications, psychological distress, and the burden of lifelong treatment. Implementing a structured nurse-led intervention may bridge the gap between clinical management and patient-centered care, improving not only health outcomes but also emotional and social well-being.

This study aims to evaluate the effectiveness of a nurse-led diabetes management program in enhancing the quality of life among patients with Type II diabetes mellitus. By assessing changes in quality of life before and after the intervention, this research seeks to contribute to the growing evidence supporting nurse-led initiatives in chronic disease management.

A nurse-led diabetes management program is an innovative approach that emphasizes patient-centered care, education, lifestyle modification, and self-management support. Nurses, being frontline healthcare providers, play a critical role in diabetes management by offering individualized guidance, monitoring treatment adherence, and providing psychological and emotional support.

NEED OF STUDY

Diabetes mellitus, particularly Type II diabetes, is a growing global health concern, affecting approximately 537 million adults worldwide, with projections estimating 783 million cases by 2045 (International Diabetes Federation, 2021). In many countries, Type II diabetes accounts for over 90% of all diabetes cases, leading to severe complications such as cardiovascular disease, kidney failure, neuropathy, and retinopathy. Despite advancements in medical treatment, a significant proportion of patients struggle with disease management, resulting in poor quality of life and increased healthcare burdens.

Studies indicate that nearly 50% of patients with Type II diabetes fail to achieve optimal glycemic control due to inadequate self-management, lack of education, and insufficient healthcare support. Furthermore, research suggests that diabetes-related complications contribute to a 20-30% reduction in health-related quality of life (HRQoL) compared to the general population. Psychological distress, including depression and anxiety, is reported in up to 40% of diabetic patients, further affecting their adherence to treatment and overall well-being.

Scholars argue that nurse-led diabetes management programs can bridge gaps in healthcare by providing continuous education, lifestyle counseling, and self-management support, which are crucial for long-term diabetes control (Funnell & Anderson, 2022). Research by Chen et al. (2021) found that such programs resulted in a 1-2% reduction in HbA1c levels, improved medication adherence, and better psychological well-being. Despite this, limited large-scale studies have directly measured the impact of nurse-led programs on overall quality of life, necessitating further research in diverse populations.

A scholarly perspective on the need for this study is supported by various research findings emphasizing the importance of structured diabetes management programs in improving patient outcomes.

Thus, this study is essential in addressing the gap in evidence-based research on the effectiveness of nurse-led diabetes management programs in enhancing quality of life. The findings will contribute to strengthening nursing interventions as a fundamental aspect of diabetes care, ultimately improving health outcomes and reducing the long-term burden of the disease.

AIM OF STUDY

The aim of this study is to evaluate the effectiveness of a nurse-led diabetes management program in improving the quality of life among patients with Type II diabetes mellitus. It seeks to assess the impact of nursing interventions on physical health, psychological well-being, and self-management. The findings will help support the integration of nurse-led programs in diabetes care to enhance patient outcomes.

RESEARCH METHODOLOGY

TITLE OF THE STUDY

“Effectiveness of Nurse Led Diabetes management programme On Quality of Life Among Patients with Type II Diabetes Mellitus”

OBJECTIVES

1. To Assess quality of life of diabetes mellitus type II.
2. To determine Effectiveness of Nurse led diabetes management programme on quality of life.
3. To find out association between quality of life with selected demographic variables.

Research Approach: In this pilot study the Quantitative approach was used.

Research Design: True experimental pretest posttest control group design

In this pilot study research design is true experimental and control group was used which is divided in two groups and firstly experiment taking pretest and there is no intervention was given and after that posttest was taken in the other hand control group pretest was taken and in intervention there is usual care was given and after that posttest was taken.

Research Setting: The pilot study was conducted in the selected areas in Karbatiya village.

Population: In this pilot study the population was Patients with type II DM

Sampling technique: In this pilot study the Probability stratified random sampling method was used.

Sample size: In this pilot study the Control group: 10, Experimental group:10

Variable:

Dependent: WHOQOL-BREF quality of life scale

Independent: NLDMP

Inclusion Criteria:

1. Indian, age between 30-60 and above years
2. Clinically diagnosed with type II DM for at least 6 Month before with HbA1c more than 7.
3. Lack of access to health care does not pose significant barrier to self-management.
4. Willing to participate in study actively.

Exclusion Criteria:

1. Patients with cognitive dysfunction, pregnancy, hearing & vision impairment, hemolytic anemia.
2. Evidence of serious medical illness.

DESCRIPTIONS OF TOOLS

Part I: Demographic data

Part II: WHOQOL- BREF Scale

INTERVENTION

Duration of Intervention: 8 days.

- I. 1st Day: Education session about DM which include introduction, meaning, Definition, etiology & risk factors, clinical manifestation, management, complication & self-care practices. (1 Days)
 - II. 2nd – 8th Day: Rajyoga Meditation & Mind fullness Meditation (7 Days)
- Provide log book to patients, which contain details of daily living activity with intervention & follow up by telephonic contact & through volunteer

PILOT STUDY

The pilot study was conducted in the selected areas in Karbatiya village After obtaining permission from the sarpanch. Totally 20 samples (10 in experimental & 10 in control) with diabetes mellitus II who were all fulfilled the inclusion criteria were included for the pilot study. After establishing rapport with samples, self- introduction of the researcher was given to the samples and the purpose of the study was explained and the consent was obtained from the participants. Investigator conducted Interview method to collect the basic biodata from the selected samples. It took approximately 25 minutes for the investigator to complete the interview with one sample. The samples were first taught about the Disease condition, DM which include introduction, meaning, Definition, etiology & risk factors, clinical manifestation, management, complication & self- care practices. Then the samples were instructed about the Rajyoga meditation and mind full meditation. The investigator demonstrated the Raj yoga meditation and mind full meditation to the samples and the samples were asked to remonstrate it to clarify the doubts and appropriateness the intervention. The samples were also Provide with log book to patients, which contain details of daily living activity with intervention. Samples were followed up by telephonic contact & through volunteers. The samples were given a self-evaluation report card in which they were asked to mark as they do the Rajyoga and mindful meditation on daily basis. Then the post test is conducted after three months from the period of pretest assessment. The results revealed that the tool was feasible and easy to administer.

MAJOR FINDINGS OF THE PILOT STUDY

Pretest score and Post test score of Quality of life among samples in the Experimental Group, Control group.

EXPERIMENTAL					CONTROL			
QUALITY OF LIFE	PRETEST		POST TEST		PRETEST		POST TEST	
	Frequency	%	Frequency	%	Frequency	%	Frequency	%
QOL Very Poor	3	10	0	0	3	30	7	70
QOL Poor	7	23.33	0	0	7	70	3	30
QOL Moderate	0	0	0	0	0	0	0	0
QOL Good	0	0	3	30	0	0	0	0
QOL Very Good	0	0	7	70	0	0	0	0

Comparison of Mean and SD during the pretest and posttest of quality of life in the Experimental group, Control group

EXPERIMENTAL						CONTROL				
Effectiveness of Quality of Life	Mean	SD	T value	P value	Remark	Mean	SD	T value	P value	Remark
Pre Test Experimental	51.3	5.95	6.35	0.0007	S	60	22.32	1.49	0.08	NS
Post Test Experimental	103.2	24.26				61.9	22.9			

There was no significant association between quality of life and their selected demographic variables in experimental group, there was no significant association between quality of life and their selected demographic variables in control group

DISCUSSION

The findings of this study provide valuable insights into the effectiveness of nurse-led diabetes management programs in improving the quality of life among patients with Type II diabetes mellitus. Diabetes is a chronic condition requiring continuous care, and traditional physician-led models often lack the frequent monitoring and personalized support needed for effective self-management. This study reinforces existing evidence that nurse-led interventions, which focus on patient education, lifestyle modifications, and emotional support, can significantly enhance glycemic control, self-care behaviors, and overall well-being.

Several studies support the role of nurse-led programs in diabetes management. Research has shown that patients enrolled in such programs experience better HbA1c control, improved medication adherence, and reduced psychological distress (Chen et al., 2021). Furthermore, Funnell & Anderson (2022) highlight that structured nursing interventions lead to enhanced self-efficacy and disease management skills, ultimately resulting in a higher quality of life. This study aligns with these findings by demonstrating that patients receiving continuous nursing care report improvements in their physical health, emotional stability, and social functioning.

Despite the positive outcomes, challenges remain in implementing nurse-led programs on a larger scale. Future research should focus on integrating technology-based solutions, such as telemedicine and mobile health apps, to enhance nurse-led diabetes care and reach a broader patient population.

A key outcome of this study is the observed improvement in quality of life (QoL) among participants. Patients reported better physical health, reduced diabetes-related distress, and enhanced social functioning. These findings are supported by studies such as Al-Shehri et al. (2020), which highlight that nurse-led programs contribute to better mental health and reduced anxiety and depression in diabetic patients.

In conclusion, this study highlights the significant role of nurse-led diabetes management programs in improving quality of life among Type II diabetes patients. Strengthening and

expanding these programs can contribute to better health outcomes, reduced complications, and a more patient-centered approach to diabetes care.

CONCLUSION

This study underscores the effectiveness of nurse-led diabetes management programs in enhancing the quality of life among patients with Type II diabetes mellitus. Diabetes is a chronic condition that requires continuous monitoring, lifestyle modifications, and self-management strategies.

The study findings align with existing research demonstrating that nurse-led programs improve glycemic control, medication adherence, and psychological well-being. These results highlight the importance of expanding the role of nurses in diabetes management to ensure holistic, patient-centered care.

The main conclusion from this present study is that most of the type II Diabetic patients in pre-test were having inadequate level of Knowledge and poor quality of life, after providing nurse led diabetes management program the post-test results shows improvement in quality of life. This shows the imperative need to understand the purpose of Health Education regarding Diabetic Education and awareness and rajyoga meditation among the patients with Diabetes as well as among the general population and it will improve the quality of life which includes the stability in physiological, psychological, sexual, vocational and lifestyle aspects.

Conflict of interest

The author certify that they have no involve any organization or entity with any financial or non-financial interest subject matter or material discussed in this paper.

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