A PRE- EXPERIMENTAL STUDY TO ASSESS THE KNOWLEDGE AND SELF INSTRUCTIONAL MODULE ON FOOT CARE AMONG DIABETES PATIENTS IN SELECTED HOSPITALS IN BHOPAL

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Abstract:

The research paper describes a pre-experimental study that aimed to assess the knowledge and effectiveness of a self-instructional module on foot care among diabetes patients in selected hospitals in Bhopal. The study design involved pre- and post-intervention assessments, without a control group. The study included a sample of diabetes patients from three hospitals in Bhopal, and the sample size was determined based on convenience sampling. The patients' knowledge of foot care was assessed using a questionnaire before and after the intervention, which consisted of a self-instructional module on foot care. The self-instructional module covered various aspects of foot care, including proper foot hygiene, regular foot inspections, and strategies for preventing foot injuries and infections. The module was developed by the researchers based on current guidelines for diabetes management. The results of the study showed that the self-instructional module was effective in improving patients' knowledge of foot care. The implications of the study suggest that self-instructional modules on foot care may be an effective strategy for improving diabetes self-management. However, the study's limitations, such as the small sample size and lack of a control group, highlight the need for further research to confirm the effectiveness of educational interventions on foot care among diabetes patients. Overall, the study emphasizes the importance of patient education and support to prevent foot complications and other diabetes-related health problems.

Keywords: Diabetes mellitus, knowledge, foot care, Prevention and management, complications, self structured module.

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INTRODUCTION

Diabetic foot is a disease complex that can develop in the skin, muscles, or bones of the foot as a result of the nerve damage, poor circulation and/or infection that is associated with diabetes. The Diabetic foot may be defined as a syndrome in which neuropathy, angiopathy and infection will lead to tissue breakdown resulting in morbidity and possible amputation (WHO 1995. Any foot pathology resulting from or its long term complications (Boulton 2002). Diabetic foot ulcers are the most common cause for prolonged hospitalization. Diabetes is the most important cause of non-traumatic foot amputations.The foot problem may vary from a superficial ulcer to the gangrene of the whole foot. Periodical foot care can prevent the problems regarding diabetes foot.

Background of the study

Approximately 15% of all the people with diabetes will be affected by a foot ulcer during their lifetime.5 year recurrence rate of foot ulcers are 70%. Up to 85% of all amputations in people with DM are preceded by foot ulcer. Various studies have proved that many of the patients with diabetes have less knowledge on foot care.

Objectives

The purpose of this study was:

To assess the existing knowledge regarding the foot care among the diabetes mellitus patients of the selected hospital in Bhopal and To evaluate the effect of self instructional module regarding the foot care among the diabetes mellitus patients by comparing pre-test & post-test knowledge scores.

Hypothesis

HO: There is no significant difference between mean pre-test & post-test knowledge score on foot care among the diabetes mellitus patients.

H1: There is significant difference in mean post-test knowledge score on foot care among the diabetes mellitus patients as measured by structured knowledge questionnaire.

Methdology

An evaluative approach was used and pre experimental one group pre test and post test design was used in this study. Data was collected from 60 diabetes patients who attended OPD in Asha Niketan hospital after getting permission from the hospital. Pre test knowledge was assessed; simultaneously self instructional module was administered. Post-test was done using same structured tool which consisted of 20 items. The items contained questions like patients' demographic variables, knowledge on foot care and prevention of diabetes foot care complications. Each correct answer was marked as 1 and incorrect answer as 0. The score was divided into 4 grades, below average (0-5), Average (6-10), Good (11-15), and Excellent (16-20). An informed consent was taken from all participants prior to being interviewed. The data was analysed and interpreted by using descriptive and inferential statistics. Mean, standard deviation, T-test was compared from the raw score obtained in pre-test and post-test from the subjects.

Results

The mean age of the participants was 58 years with the range of 41-70 years. The participants were male and female with the basic qualification of high school.

Mean knowledge score of the participants

The mean knowledge score of the participants before the self instructional module the pre-test was 3.31 with the range of 0-15 marks and after the self instructional module the post test knowledge level was 14.08 with the range of 11-20 marks. There was a statistically significant mean difference between the pre test and post test was 10.77. ($t = 17.0$, $p \leq 0.05$, df-59 - 2.00.)

Table 1: Frequency and Percentage Distribution of the Pre - test Knowledge

Score	Grade	Pre- test		Mean	SD
		Frequency(f)	Percentage (%)		
0-5	Below average	53	88.33	3.31	2.35
6-10	Average	05	8.34		
11-15	Good	02	3.33		
16-20	Excellent	0	0		

Out of the 60 participants, only 11.67% knew what are foot care and its benefits. 88.33% participants had no knowledge regarding diabetes foot care. The mean knowledge of the participants' pre test was 3.31 and SD was 2.35.

Table2: Frequency and Percentage Distribution of the Post – test Knowledge

score	Grade	Post test		Mean	SD
		Frequency(f)	Percentage (%)		
0-5	Below average	0	0	14.08	4.25
6-10	Average	0	0		
11-15	Good	47	78.34		
16-20	Excellent	13	21.66		

The post intervention knowledge score of the participants on foot care was 78.34 % had good knowledge, 21.66% had excellent knowledge,. The mean knowledge was 14.08 and S D was 4.25. The mean difference of the knowledge between pre and post test was 10.77, t=17.0.

Table 3:Comparison between pre and post-test knowledge on foot care among diabetes patients

The data in the table shows that the pre –test knowledge score mean percentage is   16.55%,

Group	Mean (X)	Mean difference	Mean Percentage (%)	' t' value
Pre-test score	3.31	10.77	16.55	17.0
Post- test score	14.08		70.4	

post test score mean percentage is 70.4% and t value is 17.0 which is statistically significant at p=0.05.

Discussion

The present study conducted among diabetes patients in order to evaluate their knowledge regarding foot care. The result findings show that the frequency & percentage distribution of pre-test & post-test level of knowledge. In post-test level of knowledge 47 (78.34%) diabetes patients scored under the good category of classification in structured questionnaire, and 13 (21.66%) diabetes patients scored under excellent category. In the pre- test under below the average category of classification score was 53 (88.33%), average category of classification score was 05 (8.34%), and good category of classification score was 02(3.33%). The comparison of mean score between pre-test & post test score shows that there is increased knowledge score among diabetes patients regarding the foot care after administering self instructional module.

Nursing Implications

Community Nursing Practice

- Study can be conducted in rural and urban areas of people with diabetes mellitus to assess their knowledge on foot care.
- Foot ulcer can be prevented by regular check up and lifestyle modification
- Awareness programme can be conducted in hospitals, nursing education schools, and colleges, rural and urban areas with the help of audio visual aids regularly.

Nursing Education

- Conferences, workshops and seminars can be held for nurses to impart, upgrade the knowledge on foot care among diabetes mellitus patients.

Nursing Administration

- The administrator can organize awareness programs, workshop and seminars for patients in the hospitals.
- The administrator should support the staff to conduct. Programme on foot care among diabetes patients.

Nursing Research

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- The study will be a valuable reference material for future researchers.
- The result of the study can encourage the patients to adopt a positive attitude towards prevention of complications of diabetes mellitus.
- Evidence based nursing practice must be taken into account in order to increase awareness among nursing students on prevention of complications of diabetes mellitus.

Recommendation

- On the basis of findings of the study, the following recommendations are being made:
- The finding of the study can be generalised to all the nursing students.
- A similar study can be conducted on large group.

Conflict of interest: None

Conclusion

The study shows that the majority of diabetes patients had poor knowledge on diabetes foot care. Hence, there is a need for conscious efforts towards improving the level of knowledge through SIM. Promotion of knowledge is not only limited to the diabetes patients but also within the general population, as part of the effort to prevent, manage and control complications.

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