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“A STUDY TO EVALUATE THE EFFECTIVENESS OF PLANNED TEACHING PROGRAMME ON KNOWLEDGE REGARDING DAILY DRESSING OF DIABETIC WOUND AMONG CAREGIVERS OF DIABETIC CLIENTS ADMITTED IN SELECTED HOSPITAL AT BANGALORE”

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ABSTRACT

This study was aimed to evaluate the effectiveness of planned teaching programme on knowledge regarding daily dressing of diabetic wound among caregivers of diabetic clients and to find out the association between pre-test knowledge scores of caregivers of diabetic clients with selected demographic variables. In the hospital setting Effective Care of Diabetic Wound is needful to improve the life status of the affected individual that can be determined by quality of recovery. A Descriptive study was conducted among caregivers of diabetic clients in selected hospital, Bangalore. The quality of recovery deals with individual needs & Problems which has to be fulfilled during hospitalization.

Keywords: Effective Care of Diabetic Wound, Diabetic clients, Caregivers of Diabetic clients, Structured Interview Schedule, Demographic variables.

INTRODUCTION

Diabetic foot ulcers are the consequence of multiple factors including peripheral neuropathy, decreased blood supply, high plantar pressure etc. & pose a significant risk for morbidity, limb loss, & mortality. The critical aspects of wound healing mechanism and host physiological status in patients with Diabetes necessitate the selection of an appropriate treatment strategy based on the complexity & type of wound. In addition to systemic antibiotics & surgical interventions, wound care is considered to be an important component of diabetic foot ulcer management¹.

Broadly, the treatment of diabetic foot ulcers includes pressure relief by resting the foot/ wearing special footwear; the removal of dead cellular material from surface of the wound (debridement/desloughing); infection control; & the use of wound dressing. Dressings are widely used in wound care, both to prevent the wound & to promote healing. There is a vast choice of dressings available to treat chronic wounds such as Diabetic foot ulcers. Dressing is a key part of the treatment pathway when caring for diabetic foot ulcers & there are many types of dressings that can be used, which also vary considerably in cost².

People with Diabetes-related foot ulceration are treated in a variety of settings, for Example Community Clinics, Surgeries & their own homes by a variety of practitioners; this can make data collection challenging. Wound care plays a pivotal role in the management of diabetic foot ulcer. There are numerous topical regimens available for the management of diabetic foot wounds including hydrogels, foam, silver impregnated dressings, Atraumatic dressings, oxygen therapy etc. However before choosing a regime one should consider factors such as general health of the patient, the process of repair, assessment of wound by means of grading, local environment of wound, knowledge on specific properties of dressing materials as well as their availability, affordability, & accessibility³.

Diabetic foot is a severe public health issue, yet rare studies investigated its global epidemiology. Here a study conducted by department of endocrinology at Nanjing drum tower Hospital, CHINA performed a systematic review and metaanalysis through searching PubMed, EMBASE, ISI Web of science, and Cochrane database on 2016, March. We found that global diabetic foot ulcer prevalence was 6.3%, which was higher in males (4.5%) than in females (3.5%), and higher in type 2 diabetic patients (6.4%) than in type 1 diabetics (5.5%)⁴.

A diabetic foot ulcer is an open sore or wound that occurs in approximately 15 percent of patients with diabetes and is commonly located on the bottom of the foot. Of those who develop a foot ulcer, 6 percent will be hospitalized due to infection or other ulcer-related complications. Diabetes is the leading cause of non-traumatic lower extremity amputations in the United States, and approximately 14-24 percent of patients with diabetes who develop a foot ulcer will require an amputation. Foot ulceration precedes 85 percent of diabetes-related amputations. Research has shown, however, that development of a foot ulcer is preventable. Anyone who has diabetes can develop a foot ulcer. Native Americans, African Americans, Hispanics, and

older men are more likely to develop ulcers. People who use insulin are at higher risk of developing a foot ulcer, as are patients with diabetes-related kidney, eye, and heart disease. Being overweight and using alcohol and tobacco also play a role in the development of foot ulcers. Ulcers form due to a combination of factors, such as lack of feeling in the foot, poor circulation, foot deformities, irritation (such as friction or pressure), and trauma, as well as duration of diabetes⁸

Patients who have diabetes for many years can develop neuropathy, a reduced or complete lack of ability to feel pain in the feet due to nerve damage caused by elevated blood glucose levels over time. The nerve damage often can occur without pain, and one may not even be aware of the problem. Your podiatrist can test feet for neuropathy with a simple, painless tool called a monofilament. Vascular disease can complicate a foot ulcer, reducing the body's ability to heal and increasing the risk for an infection. Elevations in blood glucose can reduce the body's ability to fight off a potential infection and also slow healing. Once an ulcer is noticed, seek podiatric medical care immediately. Foot ulcers in patients with diabetes should be treated to reduce the risk of infection and amputation, improve function and quality of life, and reduce health-care costs¹⁷.

Diabetic foot is often quite a dreaded disability, with long stretches of hospitalization, and impossible, mounting expenses, with the ever dangling end result of an amputated limb. The phantom limb plays its own cruel joke on the already demoralized psyche. The diabetic foot, no wonder, is one of the most feared complications of diabetes. Diabetic foot is characterized by a classical triad of neuropathy, ischemia, and infection. Preventing the diabetic foot should be the first priority. This can be achieved by identifying the high-risk individuals, like those with peripheral neuropathy, peripheral vascular disease, foot deformities, and presence of callus¹⁸

The selection of wound dressings is also an important component of diabetic wound care management. Saline-soaked gauze dressings, for example, are inexpensive, well-tolerated, and contribute to an Atraumatic, moist wound Environment. A wide variety of new dressing materials have been developed. Some of the newer dressings are – film dressing, foam dressing, non-adherent dressings, Hydrogels, hydrocolloids, and alginates. The treating foot care team has to make an appropriate choice of dressing for a particular type of wound¹⁹.

A number of adjunctive wound care treatments are under investigation and in practice for treating diabetic foot ulcers. The use of human skin equivalents has been shown to promote wound healing in diabetic ulcers via the action of cytokines and dermal matrix components that stimulate tissue growth and wound closure. A recombinant platelet-derived growth factor is also currently in use and has been shown to stimulate wound healing. It is a recombinant human PDGF-BB gel preparation, which is used for non-infected neuropathic ulcers. It is spread over the wound and covered with non-adherent, saline-soaked gauze dressing. The

dressings is changed once or twice every day. It has to be realized that this gel therapy is effective only if other modalities such as recurrent surgical debridement of the ulcer and offloading are adhered²⁰.

REVIEW OF LITERATURE

A literature review is a comprehensive summary of previous research on a topic. The literature review surveys scholarly articles, books, and other sources relevant to a particular area of research. The review should enumerate, describe, summarize, objectively evaluate and clarify this previous research. It should give a theoretical base for the research and help you (the author) determine the nature of your research. The literature review acknowledges the work of previous researchers, and in so doing, assures the reader that your work has been well conceived. It is assumed that by mentioning a previous work in the field of study, that the author has read, evaluated, and assimilated that work into the work at hand.

A literature review creates a "landscape" for the reader, giving her or him a full understanding of the developments in the field. This landscape informs the reader that the author has indeed assimilated all (or the vast majority of) previous, significant works in the field into her or his research

A Study Was Conducted to systematically assess the impact of pharmacist delivered Medication Therapy Management (MTM) services on diabetes related outcomes: hemoglobin A1C (HbA1c), blood glucose, hospitalizations, emergency department visits, and healthcare costs. The search was limited to those articles in English, studied in humans, and published between January 1, 2007 to October 10, 2018. A total of 284 articles were identified through the initial search. After eligibility criteria were applied, 15 articles were included in the final qualitative synthesis of evidence. Study designs included observational, pilot, and randomized controlled trials. Overall, pharmacist-led MTM services resulted in improved diabetes-related outcomes. Diabetes-related hospitalizations decreased by 52% due to MTM implementation. Additionally, annual costs were reduced due to MTM programs (\$1031 per patient) and medication changes initiated by pharmacists through MTM (\$166.20 for the patient and \$163.08 for the health plan).

A Study was Conducted in Manipal, (coastal South India) Diabetic foot ulcer (DFU) is the most serious and disabling long term complication of diabetes, adversely affecting the health related quality of life (HRQoL). This study evaluates the impact of patient-education on health related quality of life (HRQoL) of DFU patients. This open-labeled randomized controlled study on the effect of patient education on improvement of HRQoL, consisted of 120 DFU patients with 60 subjects each in the control group [CG] and intervention group [IG]. RAND-36 questionnaire was employed for evaluating the HRQoL. Subjects in the both IG and CG reported poor the HRQoL. But, after six months of educational intervention, the health related quality of life (HRQoL) improved substantially in IG with respect to CG as well as IG at baseline.

A Study was conducted at Queen Elizabeth central hospital in Blantyre, Malawi. Worldwide, deaths from diabetes are predicted to double between 2005 and 2030 and diabetic foot disease contributes significantly to this mortality. In June 2010 the Malawi National STEPS study for non-communicable diseases and their risk factors, described a countrywide survey of the prevalence of non-communicable diseases. In this, the prevalence of diabetes in adults aged 25 to 64 was estimated to be 5.6%, revealing that diabetes is becoming a significant public health problem in Malawi. Overall, the rate of lower limb amputation in patients with DM is 15 times higher than patients without diabetes. It is estimated that approximately 50%–70% of all lower limb amputations are due to Diabetic Foot Ulcers. In addition, it is reported that every 30 seconds one leg is amputated due to Diabetic Foot Ulcers worldwide⁷.

OBJECTIVES OF THE STUDY

- To assess the knowledge regarding daily dressing of diabetic wound among caregivers of diabetic clients admitted in selected hospital at Bangalore.
- To educate the caregivers of diabetic clients with planned teaching programme on diabetic wound care.
- To evaluate the effectiveness of planned teaching programme by comparing pre-test & post-test knowledge scores of respondents.
- To determine the association between pre-test knowledge scores of caregivers of diabetic clients with selected demographic variables
- To analyze the data by using the statistical measures.

METHODOLOGY

The research design selected for the present study was Quasi experimental one group pre-test post-test design. A total number of 30 samples were selected by using convenient sampling technique that fulfils inclusion criteria such as both male & female caregivers, caregivers who are able to read & write Kannada / English, Caregivers of Diabetic Clients who are willing to participate in the study, Caregivers of Diabetic Clients who are available at the time of data collection. Quality of recovery questionnaires(QOR 45) was adopted & the tool consists of Section A (Analysis of Demographic characteristics of the respondents), Section B (Analysis of effectiveness of Planned Teaching Program on knowledge regarding daily dressing of diabetic wound among Caregivers of Diabetic clients) &Section C (Analysis of association between socio-demographic variables with pretest- knowledge scores regarding daily dressing of diabetic wound).

DATA ANALYSIS

Findings Related to Association between Knowledge Score with Selected Demographic Variable

Variables	Below Median	Median and above	Total	Chi square	Df	P value (0.05)	Inference
1.Ageinyears							
a.<20years	1	1	2	1.74	5	0.883	NS
b.21-30years	3	2	5				
c.31-40years	6	2	8				
d.41-50years	3	4	7				
e.51-60years	3	2	5				
f.>60years	2	1	3				
2. Gender							
a.Male	10	2	12	2.5	1	0.1138	NS
b. Female	10	8	18				
3. Religion							
a.Hindu	8	7	15	0.55	2	0.7575	NS
b.Muslim	6	3	9				
c. Christian	4	2	6				
d.Others							
4. Educational status							
a.Primaryschool	9	5	14	1.78	3	0.618	NS
b.secondary school	5	4	9				
c.Pre-university	5	1	6				
d.graduation and above	1	0	1				

5.Occupation							
a.Unemployed	6	3	9	0.37	2	0.8231	NS
b. Private	2	1	3				
c.Coolie	10	8	18				
d.Gov.employee	0	0	0				
6.Familyincome							
a.≤2000	2	4	6	2.07	3	0.556	NS
b. 2001-5000	2	3	5				

c.5001-10000	10	6	16				
d.>10000	2	1	3				
7.TypeofFamily							
c.NuclearFamily	20	6	26	1.234	1	0.257	NS
d. Joint Family	2	2	4				
8.Typeofhouse							
a.Kuchcha	9	4	15	0.73	1	0.3903	NS
b.Semipucca	8	7	15				

The data obtained would be analyzed in terms of the achieving the objective of the study using descriptive and inferential statistics.

Statistical Analysis of Data

- Organization of data in master sheet.
- Frequencies and percentages to be used for analysis of demographic data.
- Calculation of mean, standard deviation of pre-test and post test scores.
- Application of paired = t test to test whether there is significant difference in the mean knowledge score of pre-test and post-test values.
- Application of chi square test to find the association between demographic variables with pre-test knowledge scores

CONCLUSION

The study was conducted with the objective of assessing the effectiveness of planned teaching program regarding daily dressing of diabetic wound among caregivers of diabetic clients. Present study reveals that level of knowledge regarding daily dressing of diabetic wound among caregivers of diabetic clients and there is no significant association between the pre-test knowledge scores of caregivers of diabetic clients with the demographic variables.

The chi-square test was resulted to be significant at $p < 0.05$, hence there is no statistical association between age, gender, religion, educational status, occupation, family-income, type of family & type of house with pre-test knowledge scores.

According to the hypothesis of the study, the investigator found that there is no significant association between pre-test knowledge score with selected demographic variables hence

2nd hypothesis is rejected. The findings of the study have implications in the field of nursing practice, nursing education, nursing administration and nursing research.

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