Bio-Psychosocial Needs of Patients with Post Diabetic Foot Amputation

Thesis

Submitted for Fulfillment of the Requirement of

Master Degree in Nursing Science

(Critical Care Nursing)

Presented By

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ADA:	American Diabetes Association
ADL:	Activities of Daily Living
AKA:	Above Knee Amputation
APA:	American Psychiatric Association
BKA:	Below Knee Amputation
CDC:	Centers for Disease Control and Prevention
DF:	Diabetic Foot
DFIs:	Diabetic Foot infections
DM:	Diabetes Mellitus
DSME:	Diabetes Self Manage education
DPN:	Diabetic Peripheral Neuropathy
LLA:	Lower Limb Amputation
NLLIC:	National Limb Loss Information Center
PAD:	Peripheral Artery Disease
PLP:	Phantom Limb Sensation
PRF:	Pulsed Radio Frequency Therapy
PTSD:	Posttraumatic Stress Disorder
T2D:	Type 2 Diabetes
WHO:	World Health Organization

Abstract

Diabetes is the cause for nearly 80% of the non-traumatic amputation. Amputation could be described as the removal of a body extremity by surgery. The patients post diabetic foot amputations are exposed to many physical, social and psychological problems which affect on his life. **Aim of the study**: to assess the bio-psychosocial needs of patients with post diabetic foot amputation. **Research design**: A descriptive exploratory design was utilized. **Subjects:** 50 patients admitted in diabetic foot clinic. **Setting**: outpatient clinic in Beni–Suef health insurance hospital at Beni–Suef city Egypt was selected for this study. **Tools for data collection**: Demographic data assessment tool, medical data assessment tool, patients' knowledge assessment interview questionnaire, bio psychosocial needs assessment interview questionnaire and Self-reported foot practice (amputated and non amputated foot). **Results:** 56% of the studied patients had unsatisfactory of total knowledge regarding diabetes mellitus and diabetic foot amputation. 72% of the studied patients had unsatisfactory self care of non-amputated foot and 78% of them had satisfactory self care of amputated foot. While regarding physical problems, 24% of the studied patients had moderate pain and 52% of them need assistance with daily living activities regarding bathing, toileting and moving. Also, 48% of them need assistance regarding functional performance. A regard to psychological needs, 100% of the studied patients suffered psychosomatic symptoms, GIT symptoms and behaviors symptoms on speech. Furthermore, in relation to the social needs, 32% of the studied patients stated that they had mild social needs parameters as feeling financial burden about cost of treatment. **Conclusion:** more than half of studied patients suffered from many physical, psychological and social problems post diabetic foot amputation. **Recommendation:** Rehabilitation programs for patients with diabetic foot amputation must be implemented through the collaboration of various rehabilitation team members.

Keywords: Diabetic foot amputation, bio-psychosocial needs

Introduction

Diabetes is a complex, chronic illness requiring continuous medical care with multifactorial risk-reduction strategies beyond glycemic control. Ongoing patient self-management education and support are critical to preventing acute complications and reducing the risk of long-term complications. Significant evidence exists that supports a range of interventions to improve diabetes outcomes **(American Diabetes Association, 2017).**

Diabetes is different from many other diseases, where medication alone may be all that is required to manage the illness. Diabetes may be controlled through lifestyle modifications such as weight loss, diet and exercise, but eventually, most individuals will need oral hypoglycemic agents and/or insulin to manage their disease. Individuals diagnosed with diabetes must perform self-care practices in order to effectively manage their illness. Because diabetes self-care practices are performed by patients, families, and significant others, there is an important need for diabetes self-management knowledge. Diabetes self-management education (DSME) is essential for successfully living with diabetes **(Centers for disease control and prevention (CDC), 2014).**

Diabetic foot ulcer is one of the severe consequences of diabetes causing large economic burden. Amputation is another severe complication of diabetes, which is preceded by a foot ulcer. According to some studies it has been proven that approximately 15% of people with diabetes develop foot ulcers eventually resulting approximately 85% of lower limb amputations. Too many ulcers fail to heal, become indolent, develop an infection and come to amputation **(Alexiadou & Doupis 2012).**

An amputation is the removal of all or part of an extremity. Amputations are done in response to diseases such as diabetes mellitus, malignant tumors, infections and peripheral vascular disorders. Other disease conditions that require amputation include extensive osteomyelitis or congenital disorders. An amputation may be done to save the client's life **(White, Duncan& Baumle, 2013).**

The most frequent indication for elective lower extremity amputation is peripheral vascular disease, with over half of the amputations attributed to diabetes mellitus. The decision to perform an amputation often comes after all other options have been exhausted. It is a final decision that cannot be reversed once initiated. However, the diseased limb is often at the center of the patient's illness, leading to a compromised medical status. The removal of

the diseased limb is necessary to eliminate systemic toxins and save the patient's life **(Parker, Kirby, Adderson &Thompson, 2011).**

The goal of care after an amputation is to ensure adequate healing of the stump to allow for the placement of a prosthesis. Many patients will experience sensation in the absent extremity. This is called phantom pain (phantom limb sensation) and it is a normal phenomenon and this will go away over time. Phantom pain may occur because the brain remembers the nerve fibers. It can take some time for the brain to accommodate the loss of all of the tissue and nerves involved **(Ramont, Niedringhous&Towle, 2012).**

Diabetic foot imposes a substantial burden on the economy in the form of increased medical costs and indirect costs from work-related absenteeism, reduced productivity at work and at home, reduced labor force participation from chronic disability and premature mortality. In addition to the economic burden that has been quantified, diabetes imposes high intangible costs on society in terms of reduced quality of life and pain and suffering of people with diabetes, their families, and friends **(CDC, 2011).**

The psychological support and care of the patients following amputation are very important. Recall the

patient is adjusting to the normal body images that come with puberty. Peer interaction is important to normal psychological development at this stage. Amputation insults the patient's developing body image. Hospitalization and rehabilitation may prevent interaction with peer groups. Support system should be identified and contacted as soon as possible. The nurse can help the patient's identify a role model who has overcome the challenges of amputation **(*Mcrobert, 2012)*.**

The nurse creates an accepting and supportive atmosphere in which the patient and family are encouraged to express and share their feelings and work through the grief process. The support from family and friends promotes the patients acceptance of the loss. The nurse helps the patient deal with immediate needs and become oriented to realistic rehabilitation goals and future independent functioning. **(Mcfarland et al., 2011).**

The loss of a limb confronts individuals with a wide range of extensive and evolving threats and challenges to their physical, psychological and social functioning. These may include impairments in physical functioning, the experience of amputation related pain, learning how to use a prosthesis, alterations in one's body image, sexuality and self-concept, changes in personal relationships and

occupational status, limitations in carrying out every day and valued activities and restrictions in participating in the community and wider society **(Desmond et al., 2012).**

Significant of the study:

Caring for patients with diabetic foots amputations means that nurses acts for their good help, restore their autonomy, assist them to achieve patient's full potential and attain better quality of life. Data generated by this study could be highlight serious needs (physical, psychological and social) for patients with diabetic foot amputations.

There were over 7.8 million cases of diabetes in Egypt in 2015 .415 million people have diabetes in the world. So, the necessity of good patients monitoring, support and education are vital to promote patient safety, determine bio-psychosocial needs, compliance, adherence to treatment plan and ensure proper management for patients with diabetes foots amputations.