



Effectiveness of Self-concept Management of Patients with Depression in Diabetic Ulcer

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Abstract: Background: This study explores the management of self-concept in improving the quality of life of diabetic ulcer patients. Low confidence in the quality of life is a factor causing patients with long-term diabetes to believe they cannot be cured properly. Ulcers result from diabetes mellitus complications due to the nervous system and blood vessel damage. Patients with diabetic ulcers experience depression and feel acute stress when the disease has been categorized as a chronic condition.

Methods: This study uses quantitative methods with a cross-sectional study design approach. The data collection techniques used purposive sampling and had 82 diabetic ulcer sufferers as respondents in the study.

Results: This study empirically proves that (p -value $\leq \alpha=0.05$) where there is effective management of the concept of self-health applied by diabetic ulcer patients in reducing the level of depression and sufferers can increase their confidence in better health factors.

Conclusion: The effectiveness of self-care management is an important indicator in overcoming diabetic ulcer disease. The low management of self-concept for people with diabetes will certainly impact increasing depression and acute stress, decreasing the quality of life for sufferers.

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1. INTRODUCTION

Health development focuses on the health of the whole community and is protected by health laws whose purpose is for the entire community to live a healthy life. Healthy living behavior occurs by balancing lifestyle, emotional, spiritual, and physical health. The high prevalence of irregular lifestyles can certainly lead to dangerous diseases that can affect the survival of individuals [1]. Health phenomena that occur in the community, such as unhealthy lifestyles such as lack of exercise supported by an unbalanced diet, family health history, obesity, and unhealthy surroundings, will certainly cause the emergence of diseases such as diabetes mellitus.

A World Health Organization [2] report stated that diabetes mellitus is a chronic disease caused by heredity and/or is due to a lack of insulin production by the pancreas or ineffectiveness of the insulin produced in the body. Therefore insulin injections are needed [3]. This certainly causes an increase in blood glucose (hyperglycemia) that can damage many body systems, such as obstruction of blood vessel tissue and proper nervous system functioning. It increases glu-

cose concentration in the blood, which will certainly have the potential for diabetic ulcer disease.

Efforts to reduce the level of depression and stress in diabetic patients certainly require knowledge of health-based self-concept that aims to provide health education [4]. These efforts include educating patients about ways to prevent or cure disease, evaluate disease-causing situations in patients, and provide preventive action plans to address the health of people with diabetes [5, 6].

In educating the public to stay healthy, health workers, doctors, nurses or paramedics, and professional health workers can collaborate to provide the community with the knowledge, skills, or training to deal with health-related diabetic ulcer disease [7]. This is certainly inseparable from the goals expected by the government outlined in the health law of the Republic of Indonesia Number 23 of 1992 concerning health development. Their main purpose is to increase awareness, willingness, and ability to live healthy for everyone to realize optimal health degrees.

However, the impact of scientific and technological progress requires us to learn about the importance of healthy living behaviors constantly. This knowledge is needed by the community so that they can overcome chronic diseases such as diabetic ulcers. According to WHO diabetes occurs

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due to chronic metabolic disorders characterized by increased blood sugar levels and impaired carbohydrate metabolism [8]. Based on this, several fundamental reasons for diabetic ulcer disease occur in many societies, such as changes in body composition and excessive lifestyle patterns without being offset by physical activities such as sports, which can cause depression and excessive stress.

Based on the explanation from the International Diabetes Federation [9], chronic diabetes occurs in the community due to the lack of public understanding of the management of self-concept to deal with diabetes before complications that can lead to diabetic ulcers.

The prevalence of diabetic ulcer patients in NTB province [10] is 1.8 % (9,171) and increases every year. Diabetic ulcers occur due to damage to blood vessels. They damage the sensory, motor, and autonomic nerves. Generally, sensory nervous system damage affects loss of sensitivity that can result in injury or trauma without being noticed by the patient beforehand. Various changes in health will certainly be felt by sufferers, causing both physical and psychological disorders for sufferers, and will certainly depend on diabetes management therapy. As a result, patients must limit the dietary patterns, which will certainly lead to physical imbalances and experience excessive psychological pressure that results in patients often feeling restless, depressed, and excessive stress.

2. LITERATURE REVIEW

Body and mental health are important for every individual to carry out various activities and activities without experiencing obstacles. To maintain optimal health, health care through preventing early health problems becomes essential for everyone through an early health examination. An examination is certainly a form of a person's self-image about the disease or symptoms that the person faces. The concept of self-image can increase confidence in their health and affect others regarding the need to maintain personal health. Wu *et al.* [11], who depicted one's health pictorially, will reduce health anxiety, making it easy for the patient to interact with others in the surrounding environment. That self-concept can certainly be a factor when evaluating the index body weight in overcoming health problems related to diabetic ulcer disease [12, 13].

Diabetic ulcers are a group of chronic diseases caused by abnormalities in insulin secretion, diabetic ulcers due to infection, ulceration or destruction of deep connective tissue associated with neuropathy, and peripheral vascular disease in the lower limbs [14]. Generally, diabetics who are resistant to insulin, of course, must always maintain their diet so that it can prevent hyperglycemia, and this will continue throughout their lives [15]. Besides that, an increase in a better quality of life will certainly improve the sufferer's health for the better.

The high level of quality of health for people with diabetes is certainly important. It needs special attention to reduce depression and acute stress that can occur at any time

when the patient is experiencing a declining health condition. This happens because people with diabetes have high stress levels, so sufferers must always take care and regulate dietary patterns and always control blood sugar, drug consumption, regular exercise, *etc.* [16].

Based on the self-health concept, Azizah [17] divides self-concept into components, as follows: (1) self-image (body image) as a person's attitude toward the emergence consciously or unconsciously, (2) the ideal concept of self which is an individual's perception of how an individual must behave according to personal standards, (3) self-esteem as a personal assessment of the results achieved by analyzing how far the individual's behavior meets his own ideal, (4) roles which are patterns of attitudes, behaviors, values and expected goals from someone based on their position in the community, and (5) identity is self-awareness that comes from observation and assessment, which is a synthesis of all aspects of self-concept as a whole. Suppose the self-concept is based on individual perceptions. In that case, Sofiana *et al.* [15] understand that self-concept can affect aspects of one's life, based on positive and negative views on the physical, emotional, intellectual, and functional dimensions that can change depending on the situation and conditions.

3. METHODS

The study results were obtained with an analytic correlational design with a cross-sectional approach. The population used in this study were patients with diabetic ulcers at the Mataram City Regional General Hospital. The research sample was taken purposively with the number of respondents ($n = 82$). To determine the level of depression and stress in patients with diabetic ulcers, the questionnaire related to the level of depression was an important instrument and carried out using the chi-square test using SPSS Version 20 statistical test equipment.

4. RESULTS

Diabetes is a disease caused by a decrease in insulin production in the body, and maintaining patients' health requires intensive treatment.

There are several important findings in this study related to self-concept in dealing with depression and stress in improving the health quality of people with diabetes. This can be seen based on the respondent's age criteria, gender, self-concept, depression level. More details can be seen in Table 1.

Depression and stress in patients with diabetic ulcers generally occur when patients aged 51–60 years ($n = 27$ (32.9 %)). This occurs because a person's immune system and body tissues are not treated properly due to the pattern of unhealthy life and no physical activities such as sports.

Based on the data, generally, people with diabetes are mostly women. This happens when the woman is pregnant until the child's birth, where generally women are more silent to care for children so physical activity is rare. However, men who have diabetes are more prone to excessive eat-

ing patterns, resulting in increased glucose and rarely having healthy activities and have excessive smoking habits (Table 2).

The data shows that the majority of respondents still do not fully understand the concept of good self-care (Table 3). This is based on findings in the field showing that (93.9 %) still do not care about their health after they have a diabetic disease, and they think the disease can be cured quickly.

Based on the study results regarding depression in ulcer patients, as many as 42.9 % of respondents reported a severe depression rate (Table 4). When the patient has chronic diabetes, the respondent will undergo treatment carried out in the hospital. These respondents experienced serious anxiety and even stress that resulted in patient despair, which meant healing the disease would certainly take longer.

Table 1. Distribution by respondent's age.

No.	Age	(n = 82)	(%)
1.	51–60	51	49.5
2.	61–69	23	35.3
3.	≥70	8	15.2

Table 2. Distribution of Respondents' Gender.

No.	Gender	(n = 82)	(%)
1.	Female	49	61.7
2.	Male	33	38.3

Table 3. Distribution of Self-Concepts.

No.	Self-concept	(n = 82)	(%)
1.	Positive	10	11.7
2.	Negative	72	88.3
-	-	82	100

Table 4. Distribution of depression levels of ulcer patients.

No.	Depression rate	(n = 82)	(%)
1.	Weight	38	42.9
2.	Medium	27	35.0
3.	Light	17	22.1
-	-	82	100

Table 5. Respondent criteria (Age, Gender, Self-Concept, Depression Level).

Criteria for Respondents	-	n = 82	(%)	p-value
Age	51–60	51	49.5	0.00
-	61–69	23	35.3	
-	≥70	8	15.2	
Gender	Female	49	59.7	0.00
-	Male	33	40.3	
Self-concept	Positive	10	11.7	0.01
-	Negative	72	88.3	
Depression rate	Weight	38	42.9	0.00
-	Medium	27	35.0	
-	Light	17	22.1	

Based on the results in this study, several important things are indicators to measure the level of anxiety and stress that occurs in diabetic ulcer patients. These indicators are divided into self-concepts of sufferers based on several important things such as self-ideal, low self-esteem, self-identity, and the important role of individuals with diabetic ulcer disease sufferers.

When assessed based on self-ideals and self-identity, respondents generally feel inferior due to the illness they suffer from injuries that are difficult to heal and even have to undergo quite serious treatment.

5. DISCUSSION

When the respondent saw that his illness was getting worse and worse, the respondent generally experienced stress and kept himself locked up. He could not accept the fact that what was happening at the moment because his body function was disrupted, and he could not do his work optimally. Therefore anxiety, stress, and social factors contribute to depression [18].

The prevalence of diabetic ulcer in patients is generally caused by unhealthy lifestyles and no attention to good health diet patterns, no attention to self-management skills, and no physical activities for fitness and health. They quickly feel stressed and depressed.

Depression and stress generally occur in people with diabetes who have been on a long-standing course of treatment, with patients aged 51-60 years (49.5 %). This happens because of lifestyle factors with excessive eating patterns and lack of health control, which can trigger many health complications.

If the diabetic prevalence is measured by sex (Table 5), more women are affected than men [19]. However, when viewing self-concept based on how to comply with treatments to control the disease so that stress levels can be controlled, women (88.3 %) have a better self-concept than men (11.7 %). This is because women can control their diet and can comply with the care needed for healing and care for personal health. More details can be seen in Table 5.

The level of depression/stress in diabetic patients, as explained in Table 5 shows that p -value $\leq \alpha=0.05$. The findings showed that severe depression occurs (42.9 %) because patients do not pay attention to the self-concept of health care properly. Unhealthy lifestyles and inappropriate diets will certainly trigger obesity that affects diabetes [20, 21]. Lack of physical activity indirectly results in depression and stress as the excess fat of the diabetics is not burned. The results demonstrate the effectiveness of self-health management applied by diabetic ulcer patients in reducing the level of depression and sufferers can increase their confidence in better health factors.

CONCLUSION

Based on the characteristics on the level of depression/stress that occurs in patients with chronic diabetic ulcers, the patient's age ranges between 51 years and over. Based on sex, more women than men suffer from diabetic ul-

cer disease. Based on the level of adherence to self-concept to maintain health, the female sex is more obedient to the recommendations and instructions for caring for and maintaining personal health for better and less anxiety and depression than male sufferers.

Levels of depression and severe stress occur in patients who have long been treated and ignore the concept of self-health care and without doing physical activities to reduce depression and stress that people with diabetic ulcers often feel. This study empirically proves that p -value $\leq \alpha=0.05$. Thus, there is effective management of the concept of self-health applied by diabetic ulcer patients in reducing the level of depression and sufferers can increase their confidence in better health factors.

ETHICS APPROVAL AND CONSENT TO PARTICIPATE

Ethics approval was obtained from the ethical committee from the College of Health Sciences (STIKES) Mataram No. 179/B.14/83/IK/III/2019 dated 17 March 2019 and Mataram City Regional General Hospital, West Nusa Tenggara Province No. 445/786/RSUD/III/2019 27 March 2019.

HUMAN AND ANIMAL RIGHTS

No animals were used in this study. All the human experiments were performed in accordance with the ethical standards laid down in the 1964 Declaration of Helsinki and its later amendments.

CONSENT FOR PUBLICATION

Not applicable.

STANDARDS OF REPORTING

STROBE guidelines were used in this study.

AVAILABILITY OF DATA AND MATERIALS

The data supporting the findings of the article are available in the Nursing Department, College of Health Science (STIKES) Mataram. The corresponding author [C.N] of the present work is available for any information about data collection.

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CONFLICT OF INTEREST

The authors declare no conflict of interest, financial or otherwise.

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