

Analysis of Factors Related to Diabetic Ulcer Patients' Anxiety at Pasar Rebo Community Health Center East Jakarta

Andi Julia Rifiana^{1*}, Siti Maryam²

Faculty of Health Sciences, Universitas Nasional, Indonesia

** Corresponding Author: Andi Julia Rifiana, Universitas Nasional,*

andi.rifiana@civitas.unas.ac.id.

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Abstract

Background: Diabetes Mellitus is one of the leading causes of death in the world. In Indonesia, the number of DM sufferers reaches 19.47 million, with a prevalence of 10.6%. One of the serious complications of DM is diabetic ulcers. This condition not only causes perceptual disorders but also has psychological impacts, such as anxiety, that can worsen the patient's condition. **Objective:** To analyze factors related to anxiety in diabetic ulcer patients at the Pasar Rebo Health Center, East Jakarta. **Methodology:** The research design used quantitative with a cross-sectional approach. The research sample consisted of 40 respondents with diabetic ulcers who were treated at the Pasar Rebo Health Center. Data were collected using a questionnaire and analyzed using the Chi-Square test to determine the relationship between perception, environmental, and economic factors with patient anxiety. **Results:** The results of the study showed a significant relationship with the Chi-Square test and obtained data on perception factors with anxiety (p-value 0.04 <0.05) environmental factors with gold (p-value 0.008 <0.05), economic factors with anxiety (p-value 0.01 <0.05) in diabetic ulcer patients at the Pasar Rebo Health Center, East Jakarta. **Conclusion:** There is an influence between perception factors, environmental factors, and economic factors with anxiety in diabetic ulcer patients at the Pasar Rebo Health Center, East Jakarta. **Suggestion:** This study is expected to be a study material and library for further research on psychosocial factors that influence anxiety in diabetic ulcer patients.

Keywords: Economy, Anxiety, Environment, Perception, Diabetic Ulcer

Introduction

Diabetes Mellitus (DM) is a non-communicable disease that is a global health problem. The American Diabetes Association (ADA) (2023) estimates that more than 422 million people worldwide suffer from DM, with a death toll reaching 1.5 million each year. This disease can cause various serious complications, one of which is diabetic ulcers, which contribute to increased morbidity and mortality. Diabetic ulcers are chronic wounds that are difficult to heal due to metabolic and vascular disorders in people with DM. This complication not only causes physical problems but also has a psychological impact on patients, such as anxiety and stress, which can worsen their health conditions. In Indonesia, the number of DM sufferers continues to increase. Data from the International Diabetes Federation (IDF) (2021) shows that Indonesia is ranked fifth with the highest number of DM sufferers in the world, reaching 19.47 million people in 2021. The increase in the number of DM sufferers is also directly proportional to the increase in cases of diabetic ulcers, which can lead to amputation if not treated properly. In addition to physical impacts, diabetic ulcer sufferers often experience psychological disorders, such as anxiety, due to changes in physical condition, limited activity, and social and economic pressures.

Anxiety is an appropriate reaction to something that is considered threatening, but anxiety becomes unnatural if the reaction and its emergence are inappropriate, both in intensity and level of symptoms. Anxiety is experienced by everyone in their life journey. Anxiety is a common thing for individuals, especially when they feel stressed in their lives. Anxiety can arise on its own or appear combined with symptoms of various other emotional disorders (Nugraha, 2020).

In addition to perception factors, environmental and economic factors also play a role in increasing anxiety in diabetic ulcer patients. Patients who do not have sufficient social support, such as from family or community, tend to experience higher anxiety because they feel alone in dealing with their illness (Nabillah, 2021). An environment that is less supportive, both emotionally and practically, can worsen the patient's psychological condition (Anggraini, 2023). Economic factors are also one of the aspects that contribute to anxiety, considering the relatively high cost of diabetic ulcer treatment and can burden patients and their families, especially if patients do not have access to adequate health services (Oktorina, 2022).

Based on a preliminary study at the Pasar Rebo Health Center, East Jakarta, it was found that many diabetic ulcer patients experience anxiety influenced by several factors, such as perceptions of the disease, their social environment, and their economic conditions. Negative perceptions of the disease can increase anxiety because patients feel they have lost control over their health condition. In addition, an unsupportive environment, such as lack of family support or social stigma, can also worsen patient anxiety. Economic factors are also one of the aspects that contribute to anxiety, considering the relatively high cost of diabetic ulcer treatment and can burden patients and their families.

In the context of nursing, understanding the factors that influence anxiety in diabetic ulcer patients is very important in order to provide appropriate interventions to improve the patient's quality of life. Therefore, this study aims to analyze the influence of perception, environmental, and economic factors on the anxiety of diabetic ulcer patients at Pasar Rebo Health Center, East Jakarta.

Method

This study used a cross-sectional design with a quantitative approach. The study sample was diabetic ulcer patients at the Pasar Rebo Health Center who were selected using a total sampling method of 40 respondents. Data were collected through a questionnaire that measured perception, environmental, and economic factors on patient anxiety. Data analysis was carried out using the Chi-Square test. The independent variable of this study was animated video health education. The dependent variables in the following research were perception factors, environmental factors, and economic factors. The instruments used in this study were questionnaires of perception factors, environmental factors, and economic factors that had been tested for validity and reliability, consisting of 10 statement items for each questionnaire. The questionnaire used in the dependent variable Anxiety was the DASS 21 (Depression Anxiety Stress Scale) questionnaire, consisting of 21 questions.

Results

Table 1. Frequency Distribution of Respondent Characteristics at Pasar Rebo Health Center, East Jakarta

No	Respondent Characteristics	Frequency (n)	Percentage (%)
1	Age		
	21-31	3	7,5
	32-42	5	12,5
	43-53	13	32,5
	54-64	15	37,5
	>65	4	10,0
2	Gender		
	Women	23	57,5
	Men	17	42,5
3	Work		
	Self-Employed	6	15,0
	Private Employee	6	15,0
	Teacher	3	7,5
	Housewife	13	32,5
	Retiree	12	30,0
	Total	40	100

Based on table 1 above, the results of the frequency distribution of respondents based on the age of respondents at the Pasar Rebo Health Center, East Jakarta. It is known that the age of 21-31 years there are 3 respondents (7.5%), the age of 32-42 years there are 5 respondents (12.5%), the age of 43-53 years there are 13 respondents (32.5%), the age of 54-64 years there are 15 respondents (37.5%) and there are ages >65 years there are 4 respondents (10%) of the total respondents there are 40 Patients (100.0%).

The results of the frequency distribution of respondents based on the gender of respondents at the Pasar Rebo Health Center, East Jakarta. Based on the gender of respondents, the results obtained were that the respondents who were female numbered 23 respondents (57.5%), while the male gender was 17 respondents (42.5%) of the total respondents, there were 40 Patients (100.0%).

The results of the frequency distribution based on the type of work of respondents at the Pasar Rebo Health Center, East Jakarta. It was found that 6 people worked as self-employed (15%), respondents who worked as private employees were 6 people (15%), respondents who worked as teachers were 3 people (7.5%), respondents who were housewives were 13 people (32.5%), and respondents who were retired were 12 people (30%).

Table 2
The relationship between perception factors, environmental factors, and economic factors on anxiety levels in diabetic ulcer patients at the Pasar Rebo Community Health Center, East Jakarta.

	Anxiety		Ulcer Patients		Diabetic				
Variable	High		Medium		Low		Total		P-value
	n	%	n	%	n	%	n	%	
Perception Factor									
Good	3	37,5	2	25,0	3	37,5	8	100	0,04
Enough	4	28,6	10	71,4	0	0,0	14	100	
Less	9	50,0	5	27,8	4	22,2	18	100	
Environmental Factors									
Good	4	28,6	9	64,3	1	7,1	14	100	0,008
Enough	11	61,1	2	11,1	5	27,8	18	100	
Less	1	12,5	6	75,0	1	12,5	8	100	
Economic Factors									
Good	0	0,0	3	75,0	1	25,0	4	100	0,01
Enough	2	15,4	6	46,2	5	38,5	13	100	
Less	14	60,9	8	34,8	1	4,3	23	100	

Anxiety is one of the psychological conditions often experienced by diabetic ulcer patients. Based on the results of the analysis in the table, it was found that perception, environment, and economic factors have a significant relationship to the level of patient anxiety.

The perception factor shows that patients with a poor understanding of their condition tend to experience higher anxiety (50%). Meanwhile, patients with sufficient perception experience more moderate anxiety (71.4%). These results indicate that a good understanding of the disease can help reduce anxiety levels. Statistical analysis confirmed this relationship with a value (p-value 0.04), which indicates a significant relationship between perception and anxiety factors.

Furthermore, environmental factors also have a significant effect on patient anxiety (p-value 0.008). Patients who have a good environment tend to experience moderate anxiety (64.3%), while patients with sufficient environments experience more high anxiety (61.1%). This indicates that good environmental support, both from family and social, can help reduce patient anxiety in dealing with their illness.

Economic factors also play an important role in patient anxiety levels (p-value 0.01). Patients with poor economic conditions tend to experience high anxiety (60.9%), while patients with sufficient economic conditions tend to experience moderate anxiety

(46.2%). This suggests that better economic conditions can provide better access to health care and support, which can ultimately help reduce patient anxiety levels. From these results, it can be concluded that psychosocial factors, such as perception, environment, and economy, play an important role in determining the level of anxiety in diabetic ulcer patients. Therefore, a holistic approach is needed in patient care, not only from the medical aspect but also from the psychosocial aspect, to improve their quality of life.

Discussion

1. Perception Factors Towards Anxiety of Diabetic Ulcer Patients

Based on the results of the study, it shows that the perception factor has a significant effect on the level of anxiety of diabetic ulcer patients at the Pasar Rebo Health Center. Based on the data, respondents with less perception factors experienced high stress as many as 21 patients (52.5%).

This study is in line with the study by Manungkalit (2022), which used the Chi-Square test on 100 respondents at the Sidoarjo Wound House. The study obtained a p-value of 0.077 ($p \leq 0.05$), so it can be interpreted that there is a relationship between perception factors and anxiety in diabetic ulcer patients.

Strengthened by research conducted by Purwanti 2020, in 77 patients with the purposive sampling method and the Chi Square Test, a significant relationship was obtained between perception factors and anxiety in diabetic ulcer patients. This study obtained a p-value of 0.017 ($p \leq 0.05$).

The perception of people around diabetic ulcer patients regarding their body condition can affect their self-acceptance, which ultimately contributes to the level of anxiety they experience. The reactions of others, both verbally and nonverbally, can shape diabetic ulcer patients' assessments of themselves. This affects their perception of the condition they are experiencing, which ultimately impacts their body image. Negative reactions from the surrounding environment can make patients feel ignored during social interactions or feel disliked because of the wounds on their bodies (Luthfiani, 2021).

2. Environmental Factors on Anxiety in Diabetic Ulcer Patients

Based on the results of the study, it shows that environmental factors have been proven to influence anxiety in diabetic ulcer patients at the Pasar Rebo Health Center. From the results of the research data, it was found that environmental factors that influence anxiety in diabetic ulcer patients showed that the majority of respondents, namely 18 people (45%), were categorized as having a fairly supportive environment.

This study is in line with Aqila's study (2023), which used the Chi-Square test on 40 respondents at the Sultan Agung Islamic Hospital in Semarang. The study obtained a p-value of 0.003 ($p \leq 0.05$), so it can be interpreted that there is a relationship between environmental factors in diabetic ulcer patients.

Research (Adri, 2020) supports this study; in 76 respondents with diabetic ulcers, it was found that they had a fairly supportive environment or could cause moderate anxiety in patients. The study obtained a P Value of 0.011 ($p \leq 0.05$), so it can be interpreted that there is a relationship between environmental factors and anxiety in diabetic ulcer patients. Environmental factors refer to external conditions that can affect the level of anxiety and health of patients with diabetic foot ulcers. The environmental factors that influence the anxiety of diabetic ulcer patients include access to health services, environmental cleanliness, and social support. Studies show that a supportive environment, such as access to good medical care and adequate social support, can help reduce anxiety levels and accelerate wound healing. Conversely, poor environmental factors, such as lack of cleanliness, can worsen diabetic ulcer conditions and increase patient stress levels. (Jalilian, 2020).

3. Economic Factors on Anxiety of Diabetic Ulcer Patients

The results of the analysis using the Chi-Square test of the relationship between economic factors and stress in diabetic ulcer patients showed a p-value of 0.01 ($p < 0.05$) so H_0 was rejected and H_a was accepted or there was a significant relationship between economic factors and anxiety in diabetic ulcer patients at the Pasar Rebo Health Center, East Jakarta.

This study is in line with Umi's (2024) study which used the Chi-Square test on 53 respondents at the Bhyangkara Level I Hospital, Puskokkes Polri. The study

obtained a p-value of 0.021 ($p \leq 0.05$), so it can be interpreted that there is a relationship between anxiety and economic factors in diabetic ulcer patients.

Research (Oktorina, 2022) supports this study in 35 samples of diabetic ulcer respondents who experienced low economic status, which caused anxiety in the respondents. In this study, the p-value was 0.028 ($p \leq 0.05$), so it can be interpreted that there is a relationship between economic factors and anxiety in diabetic ulcer patients. This economic factor plays an important role in determining diabetic ulcer prevention behavior because it affects how active a person is in accessing and utilizing health services for prevention. Diabetic ulcer treatment requires relatively high costs. Financial limitations can hinder patients' ability to properly care for their feet and undergo routine medical examinations, which are often only done when there are complaints or complications. In addition, low utilization of health facilities is also a factor causing diabetic ulcers in individuals with limited economic conditions (Oktorina, 2022)

Conclusion

1. The majority of diabetic ulcer patients at Pasar Rebo Health Center experienced anxiety in the sufficient category (45%) from a total of 40 respondents.
2. Perception factors were dominated by the less category (52.5%), environmental factors were dominated by the sufficient category (45%), and economic factors were dominated by the less category (50%).
3. There was a significant relationship between perception factors ($p = 0.04$), environmental factors ($p = 0.008$), and economic factors ($p = 0.01$) with anxiety in diabetic ulcer patients.

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