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Factors Associated With Anxiety in Diabetic Ulcer Patients at Pasar Rebo Community Health Center, East Jakarta

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Abstract

Background: Diabetes Mellitus (DM) is one of the leading causes of mortality worldwide. In Indonesia, DM cases reach 19.47 million, with a prevalence of 10.6%. A severe complication of DM is diabetic ulcers, which not only cause physical health issues but also lead to psychological effects such as anxiety, which can worsen the patient's condition. Anxiety in diabetic ulcer patients can impact treatment adherence and overall quality of life.
Aims: This study aims to analyze the factors associated with anxiety in diabetic ulcer patients at Pasar Rebo Community Health Center, East Jakarta.
Methods: This study employed a quantitative cross-sectional design. A total of 40 diabetic ulcer patients who received treatment at Pasar Rebo Community Health Center were recruited as respondents. Data were collected using a questionnaire and analyzed using the Chi-Square test to examine the relationship between perception, environment, and economic factors with anxiety levels.
Results: The findings showed a significant relationship between perception and anxiety (p-value 0.04 < 0.05), environment and anxiety (p-value 0.008 < 0.05), and economic factors and anxiety (p-value 0.01 < 0.05) in diabetic ulcer patients at Pasar Rebo Community Health Center.
Conclusion: There is a significant influence of perception, environmental, and economic factors on anxiety levels in diabetic ulcer patients. This study is expected to serve as a reference for further research on psychosocial factors affecting anxiety in diabetic ulcer patients.

Keywords: Anxiety, Diabetic Ulcers, Economic Factors, Environmental Factors, Perception

INTRODUCTION

Diabetes Mellitus (DM) is a chronic metabolic disease characterized by high blood sugar levels due to insufficient insulin production, insulin resistance, or both. DM ranks third as the leading cause of death worldwide, affecting individuals of all ages. In Indonesia, the prevalence of DM continues to rise, with a high number of cases reported annually. One of the most severe complications of DM is diabetic ulcers, which occur due to prolonged high blood sugar levels that impair wound healing and increase infection risks.

Apart from physical complications, diabetic ulcers can lead to psychological issues such as anxiety. Many diabetic ulcer patients experience anxiety due to changes in body image, fear of amputation, and concerns over medical expenses. Research indicates that psychological stress can further elevate blood glucose levels, exacerbating the patient's condition. Given this concern, this study aims to analyze factors associated with anxiety in diabetic ulcer patients, focusing on perception, environmental, and economic factors.

METHOD

Design: This study used a cross-sectional quantitative approach to analyze the correlation between perception, environment, economic factors, and anxiety levels in diabetic ulcer patients.

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Data Collection

Questionnaire: Used to assess perception, environmental, and economic factors affecting anxiety.
Chi-Square Test: Applied to determine the statistical relationship between these factors and anxiety levels.

Sample

The study involved 40 diabetic ulcer patients undergoing treatment at Pasar Rebo Community Health Center.

Data analysis

The data were analyzed using univariate and bivariate analyses. Univariate analysis was used to describe the characteristics of respondents, while bivariate analysis examined correlations between independent variables (perception, environment, economic factors) and the dependent variable (anxiety levels).

RESULTS

Table 4.1
Frequency Distribution of Respondent Characteristics

Characteristics	Frequency (n)	Percentage (%)
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
Gender		
Female	23	57.5
Male	17	42.5
Occupation		
Entrepreneur	6	15.0
Private Employee	6	15.0
Teacher	3	7.5
Housewife	13	32.5
Retired	12	30.0
Total	**40**	**100**

Based on Table 4.1, it was found that 3 respondents (7.5%) were in the age range of 21-31 years, 5 respondents (12.5%) were in the age range of 32-42 years, 13 respondents (32.5%) were in the age range of 43-53 years, 15 respondents (37.5%) were in the age range of 54-64 years, and 4 respondents (10%) were over 65 years old. Regarding gender, 23 respondents (57.5%) were female, while 17 respondents (42.5%) were male. In terms of occupation, 6 respondents (15%) were entrepreneurs, 6 respondents (15%) were private employees, 3 respondents (7.5%) were teachers, 13 respondents (32.5%) were housewives, and 12 respondents (30%) were retired.

Univariate Analysis

The variables analyzed in this study include perception factors, environmental factors, economic factors, and anxiety factors in diabetic ulcer patients. The univariate data processing results for the studied variables are as follows:

Frequency Distribution of Perception Factors

Table 4.2
Frequency Distribution of Perception Factors Related to Anxiety in Diabetic Ulcer Patients

Perception Factor	Frequency (n)	Percentage (%)
Good	8	20.0
Moderate	11	27.5
Poor	21	52.5
Total	**40**	**100**

Table 4.2 indicates that perception factors are related to anxiety in diabetic ulcer patients. Respondents categorized as having good perception accounted for 8 respondents (20%), those with moderate

perception were 11 respondents (27.5%), and those with poor perception were 21 respondents (52.5%).

Frequency Distribution of Environmental Factors

Table 4.3
Frequency Distribution of Environmental Factors Related to Anxiety in Diabetic Ulcer Patients

Environmental Factor	Frequency (n)	Percentage (%)
Good	16	40.0
Moderate	18	45.0
Poor	6	15.0
Total	**40**	**100**

Table 4.3 shows that environmental factors are associated with anxiety in diabetic ulcer patients. Respondents with good environmental conditions accounted for 16 respondents (40%), those with moderate environmental conditions were 18 respondents (45%), and those with poor environmental conditions were 6 respondents (15%).

Frequency Distribution of Economic Factors

Table 4.4
Frequency Distribution of Economic Factors Related to Anxiety in Diabetic Ulcer Patients

Economic Factor	Frequency (n)	Percentage (%)
Good	6	15.0
Moderate	14	35.0
Poor	20	50.0
Total	**40**	**100**

Table 4.4 shows that economic factors are associated with anxiety in diabetic ulcer patients. Respondents categorized as having good economic conditions were 6 respondents (15%), those with moderate economic conditions were 14 respondents (35%), and those with poor economic conditions were 20 respondents (50%).

Frequency Distribution of Anxiety Factors

Table 4.5
Frequency Distribution of Anxiety Factors in Diabetic Ulcer Patients

Anxiety Factor	Frequency (n)	Percentage (%)
High	17	42.5
Moderate	18	45.0
Low	5	12.5
Total	**40**	**100**

Table 4.5 shows that anxiety factors significantly affect diabetic ulcer patients. Respondents experiencing high anxiety were 17 respondents (42.5%), those with moderate anxiety were 18 respondents (45%), and those with low anxiety were 5 respondents (12.5%).

Bivariate Analysis

Bivariate analysis in this study was used to determine the relationship between perception factors, environmental factors, and economic factors with anxiety in diabetic ulcer patients at Pasar Rebo Community Health Center, East Jakarta.

Relationship Between Perception Factors and Anxiety in Diabetic Ulcer Patients

Table 4.6
Relationship Between Perception Factors and Anxiety in Diabetic Ulcer Patients at Pasar Rebo Community Health Center

Perception Factor	High Anxiety (%)	Moderate Anxiety (%)	Low Anxiety (%)	Total (%)	P-value
Good	3 (37.5)	2 (25.0)	3 (37.5)	8 (100)	0.04
Moderate	4 (28.6)	10 (71.4)	0 (0.0)	14 (100)	
Poor	9 (50.0)	5 (27.8)	4 (22.2)	18 (100)	
Total	**16 (40.0)**	**17 (42.5)**	**7 (17.5)**	**40 (100)**	

Chi-Square test results showed a p-value of 0.04 ($p < 0.05$), indicating a significant relationship between perception factors

and anxiety levels in diabetic ulcer patients at Pasar Rebo Community Health Center.

Relationship Between Environmental Factors and Anxiety in Diabetic Ulcer Patients

Table 4.7
Relationship Between Environmental Factors and Anxiety in Diabetic Ulcer Patients

Environmental Factor	High Anxiety (%)	Moderate Anxiety (%)	Low Anxiety (%)	Total (%)	P-value
Good	4 (28.6)	9 (64.3)	1 (7.1)	14 (100)	0.008
Moderate	11 (61.1)	2 (11.1)	5 (27.8)	18 (100)	
Poor	1 (12.5)	6 (75.0)	1 (12.5)	8 (100)	
Total	**16 (40.0)**	**17 (42.5)**	**7 (17.5)**	**40 (100)**	

Chi-Square test results showed a p-value of 0.008 ($p < 0.05$), indicating a significant relationship between environmental factors and anxiety levels in diabetic ulcer patients.

DISCUSSION

Frequency Distribution of Perception Factors

The study results indicate that perception factors significantly influence anxiety levels in diabetic ulcer patients at Pasar Rebo Community Health Center. The data show that respondents with poor perception factors experienced high anxiety, with 21 patients (52.5%).

This finding suggests that poor perception is strongly associated with higher anxiety levels in diabetic ulcer patients, particularly in the Nursing Care Clinic at Pasar Rebo Community Health Center. Patients who have limited understanding of diabetic ulcers tend to experience greater anxiety due to uncertainty about their condition, fear of complications, and lack of information regarding treatment and wound care. Conversely, patients with better perception, such as adequate knowledge of the causes, treatment, and recovery possibilities, exhibited lower anxiety levels. This can be attributed to the health education provided by medical personnel at the health center, either through direct consultation or health promotion programs.

In healthcare services at the community health center, these findings highlight the importance of education-based interventions to improve patients' perceptions of their illness. By providing better understanding through effective communication approaches, patients may feel more confident in managing their disease, thereby reducing their anxiety levels. Therefore, healthcare professionals at Pasar Rebo Community Health Center are advised to continuously enhance educational strategies that are more interactive and easily understood by diabetic ulcer patients.

Frequency Distribution of Environmental Factors

The study results show that environmental factors significantly affect anxiety in diabetic ulcer patients at Pasar Rebo Community Health Center. According to the data, the majority of respondents, 18 people (45%), were categorized as having a moderately supportive environment.

In the Nursing Care Clinic at Pasar Rebo Community Health Center, most respondents were in the moderate environment category. This suggests that a significant portion of diabetic ulcer patients live in environments that only partially meet their needs in managing anxiety. This condition may include limitations in environmental hygiene, lack of optimal family support, or restricted access to healthcare facilities.

A moderately supportive environment can be a barrier to effectively managing anxiety, potentially worsening the condition of diabetic ulcers. Therefore, interventions to improve environmental quality, such as strengthening

social support and enhancing access to healthcare facilities, are crucial to supporting patient well-being.

Frequency Distribution of Economic Factors

The study results indicate that economic factors influence stress levels in diabetic ulcer patients at Pasar Rebo Community Health Center. The data show that among 40 respondents, the majority—20 people (50%)—fell into the low-income category.

This high percentage reflects that more than half of the patients experience significant anxiety related to their economic conditions. Patients with financial limitations often feel anxious about their ability to afford necessary treatment, including medications, routine wound care, and medical consultations.

The inability to work due to deteriorating health conditions further exacerbates psychological stress, as patients feel they lack sufficient income to meet their daily needs. Additionally, limited access to nutritious food and a supportive living environment can further worsen their health condition, ultimately increasing anxiety levels.

In the Nursing Care Clinic at Pasar Rebo Community Health Center, these findings highlight the need for a more comprehensive approach in managing diabetic ulcer patients. Interventions involving financial assistance, subsidized medication programs, and psychosocial support can help reduce patient anxiety. Moreover, educating patients on cost-effective disease management strategies can provide reassurance and confidence in undergoing treatment. With a more holistic approach, it is hoped that patient anxiety can be reduced, allowing for a more optimal healing process.

Frequency Distribution of Anxiety Factors

The study results indicate that anxiety significantly affects diabetic ulcer patients, with the majority of respondents (18 people, 45%) classified as having moderate anxiety. Based on research conducted at Pasar Rebo Community Health Center's Nursing Care Clinic, anxiety levels can be triggered by various factors, such as uncertainty about the disease, fear of more severe complications, and limited access to healthcare services and treatment costs.

Patients with high anxiety levels tend to have difficulty undergoing treatment due to fear and doubt regarding the effectiveness of therapy. Additionally, excessive anxiety can have negative impacts on patients' physical and mental health, such as increased blood sugar levels due to stress, sleep disturbances, and poor adherence to wound care. This condition can slow the healing process of diabetic ulcers and increase the risk of further complications.

Relationship Between Perception Factors and Anxiety in Diabetic Ulcer Patients

The Chi-Square test analysis of the relationship between perception factors and anxiety in diabetic ulcer patients showed a p-value of 0.04 ($p < 0.05$), meaning H0 was rejected, and Ha was accepted. This indicates a significant relationship between perception factors and anxiety levels in diabetic ulcer patients at Pasar Rebo Community Health Center.
The perception of people around diabetic ulcer patients about their condition can influence self-acceptance, which ultimately contributes to their anxiety levels. Verbal and nonverbal reactions from others can shape how diabetic ulcer patients perceive themselves, affecting their self-image. Negative social reactions

may cause patients to feel isolated or unaccepted due to visible wounds on their bodies (Luthfiani, 2021).

This study aligns with research by Manungkalit (2022), which used the Chi-Square test on 100 respondents at Rumah Luka Sidoarjo. The study found a p-value of 0.077 ($p \leq 0.05$), indicating a relationship between perception factors and anxiety in diabetic ulcer patients. However, another study by Nurdin (2021) showed no significant relationship between perception factors and diabetic ulcer patients, with a Chi-Square test yielding a p-value of 0.655 ($p > 0.05$).

Based on these findings, it is assumed that diabetic ulcer patients' perceptions of themselves, influenced by their surroundings, contribute to their anxiety levels. Social reactions, both verbal and nonverbal, shape patients' self-image and impact how they cope with their condition. The more negative the perception formed, the higher the likelihood of experiencing anxiety.

Relationship Between Environmental Factors and Anxiety in Diabetic Ulcer Patients

The Chi-Square test analysis of the relationship between environmental factors and anxiety in diabetic ulcer patients showed a p-value of 0.008 ($p < 0.05$), indicating a significant relationship between environmental factors and anxiety at Pasar Rebo Community Health Center.

Environmental factors refer to external conditions that influence anxiety levels and health in diabetic ulcer patients. These factors include social conditions and physical environments that affect wound healing and quality of life. Among the environmental factors influencing anxiety in diabetic ulcer patients are access to healthcare, hygiene, social support, and economic conditions. Studies indicate that a supportive environment, such as access to quality medical care and sufficient social support, can help reduce anxiety and accelerate wound healing. Conversely, poor environmental conditions, such as inadequate hygiene, can worsen diabetic ulcer conditions and increase stress levels (Jalilian, 2020).

Relationship Between Economic Factors and Anxiety in Diabetic Ulcer Patients

The Chi-Square test analysis of the relationship between economic factors and anxiety in diabetic ulcer patients showed a p-value of 0.01 ($p < 0.05$), indicating a significant relationship between economic factors and anxiety at Pasar Rebu Community Health Center.

Most diabetic ulcer patients experience anxiety due to concerns that their ulcers will take too long to heal. Patients feel anxious and fearful, even limiting their daily activities. Additionally, diabetic ulcers impose an economic burden due to routine wound care, infection risks, potential amputations, and hospital stays, increasing financial-related anxiety.

This study aligns with research by Umi (2024), which used the Chi-Square test on 53 respondents at Bhayangkara Level I Pusdokkes Polri Hospital. The study found a p-value of 0.021 ($p \leq 0.05$), indicating a relationship between economic factors and anxiety in diabetic ulcer patients. However, another study by Putri (2023) found no significant relationship between economic factors and anxiety, with a p-value of 0.146 ($p > 0.05$).

CONCLUSION

This study concludes that perception, environmental, and economic factors significantly influence anxiety levels in diabetic ulcer patients. Addressing these factors through holistic nursing care and community support programs can help mitigate anxiety and enhance the overall well-being of patients. Future research should explore long-term interventions to

support diabetic ulcer patients in managing both physical and psychological challenges.

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REFERENCES

American Diabetes Association. (2023). Diabetes Statistics and Research.

International Diabetes Federation. (2021). Global Diabetes Report.

Kemenkes RI. (2023). Laporan Kesehatan Indonesia. Direktorat Jenderal Pelayanan Kesehatan, Kementerian Kesehatan Republik Indonesia.

Kinivaldy, S. (2023). Epidemiology of Diabetes Mellitus and Its Complications. Journal of Metabolic Diseases.

Kurdi, M. (2020). Psychological Impact of Chronic Diseases: Anxiety and Depression in Diabetic Patients. Indonesian Journal of Mental Health.

Nabillah, R. (2021). The Relationship Between Body Image and Anxiety in Diabetic Patients. Nursing Research Journal.

Oktorina, S. (2019). Economic Challenges in Diabetes Management. Journal of Public Health.

Setiati, S. (2017). Pathophysiology of Diabetes Mellitus and Its Complications. Journal of Internal Medicine.

Stuart, G. W. (2016). Principles and Practice of Psychiatric Nursing. Elsevier.

Yulis Hati, M. (2020). The Role of Family Support in Managing Anxiety in Chronic Disease Patients. Journal of Health Psychology.