

The Relationship Between Family Support and Patient Compliance in the Management of Diabetic Wounds at Griya Luka Pringsewu

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ABSTRACT

Background & Objective: Diabetes mellitus is a chronic disease that often leads to diabetic wounds requiring continuous and proper care. Patient adherence to wound care remains a challenge and may be influenced by family support. This study aimed to determine the relationship between family support and patient adherence in diabetic wound care. **Method:** This study employed a quantitative correlational design with a cross-sectional approach. The population consisted of 60 patients with diabetic wounds, and 30 respondents were selected using quota sampling. Data were collected using family support and wound care adherence questionnaires. Data analysis was conducted using the Gamma test. **Result:** The results showed a significant relationship between family support and patient adherence in diabetic wound care, with a p-value of 0.043 and a correlation coefficient of 0.609, indicating a strong positive relationship. Most respondents had a moderate level of adherence. **Conclusion:** Family support is significantly associated with patient adherence in diabetic wound care, and strong family support can improve patient adherence in performing wound care.

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Introduction

Diabetes mellitus is a chronic metabolic disease characterized by elevated blood glucose levels and has become a major global health issue. Patients with diabetic wounds have a high recurrence rate, reaching 40% within one year and 65% within five years. This condition places them at significant risk, which can lead to amputation. The wound healing process is further hindered, and the risk of serious complications

increases, due to low patient adherence to wound care and the ineffectiveness of support provided by family members (Fitriyana et al., 2024).

According to data from the International Diabetes Federation (IDF) in 2024, it is estimated that approximately 589 million people aged 20 to 79 are living with diabetes. This number is projected to continue rising and could reach 853 million individuals by 2050. Results from the 2023 Indonesian Health Survey (SKI) confirm that the prevalence of diabetes remains a serious concern across all age groups. Approximately 1.7% of the total population has received a diagnosis from healthcare professionals. This figure rises to 2.2% specifically among those aged 15 and older (Ministry of Health, 2023).

International organizations recommend checking wounds at least twice a week to detect irritation, infection, or new wounds (Sertsu et al., 2023). Diabetes mellitus requires a high level of adherence to treatment and wound care. However, many patients are non-compliant due to factors such as the absence of family members to accompany them, the distance to healthcare services, lack of knowledge, low motivation from close relatives, and financial and economic constraints. These factors can hinder healing and slow down the management of diabetic wounds (Ledy Ervita, et al., 2022).

Family members are the closest and most important people in improving adherence and the success of diabetes mellitus wound care. Family support improves treatment outcomes and promotes infection prevention. With this family support, patients will be more compliant in undergoing wound care (Arinimi et al., 2024).

Previous research conducted by Ervita et al. (2022) showed that patients who received strong family support generally had better adherence to wound care. These findings align with the results of a study by Mimunah et al. (2023), which found a significant association between family support and foot care habits or behaviors. Additionally, Utami et al. (2024) noted that adequate family attention has the potential to reduce the risk of severe complications, such as diabetic ulcers, in patients with diabetes mellitus.

In the context of diabetes mellitus patient care, adherence to wound care is a crucial factor in preventing serious complications such as infection or amputation. Although various studies have examined patient adherence in diabetes in general, research specifically focusing on the level of patient adherence to diabetic wound care remains limited. This study offers a novel perspective by examining the relationship between family support and patient adherence levels using a family support instrument divided into emotional/appreciation, instrumental, and informational dimensions. This approach allows for a deeper analysis of how each form of family support contributes to patients' adherence to care. Furthermore, this study was conducted at Griya Luka Pringsewu, providing a more specific and relevant local context by considering the social factors and facilities that influence patient adherence. Thus, this study not only strengthens our understanding of the family's role in the management of diabetic wounds but also provides a foundation for more targeted and effective nursing interventions at the community level.

Objective

The purpose of this study is to determine the relationship between family support and patient compliance with diabetic wound care at Griya Luka Pringsewu.

Method

This study employed a quantitative correlational method with a cross-sectional design, conducted at Griya Luka Pringsewu on a population of 60 patients with diabetes mellitus who were actively undergoing wound care between March and May 2025. From this population, the researcher selected a sample of 30 respondents using quota sampling according to predetermined criteria. Data collection took place on August 25, 2025, via a structured questionnaire designed to measure family support (covering emotional/appreciation, informational, and instrumental aspects) as well as the level of patient adherence to wound care. The collected data were then presented descriptively in the form of frequency distributions and percentages, and analyzed using the Gamma test to determine the relationship between the family support variable and patient compliance with diabetic wound care.

Results

This study analyzed the relationship between family support and the level of patient compliance in managing diabetic wounds, with the results indicating that the majority of respondents had good family support and their wound care compliance fell into the moderate category. Based on bivariate analysis using the Gamma test, a statistically significant relationship was found between family support and patient compliance in managing diabetic wounds, with a p-value of 0.043 and a correlation coefficient of 0.609, indicating that the two variables have a strong and positive relationship.

TABLE 1. Frequency Distribution of Respondents Based on Family Support for Patients with Diabetes Mellitus at Griya Luka Pringsewu

Family Support	Number	Percentage (%)
Insufficient	1	3,3
Adequate	7	23,3
Good	22	73,3
Total	30	100

Based on Table 1, it is evident that of the 30 respondents, the majority – 22 respondents (73.3%) – received good family support. Meanwhile, only 1 respondent (3.3%) received inadequate family support.

TABLE 2. Frequency Distribution of Respondents Based on Compliance Levels in Wound Care for Patients with Diabetes Mellitus at Griya Luka Pringsewu

Compliance Level	Number	Percentage (%)
Low	8	26,7
Moderate	12	40,0
High	10	33,3
Total	30	100

Based on Table 2, it is evident that of the 30 respondents, the majority had a Moderate Level of Compliance (12 respondents, or 40.0%), a High Level of Compliance (10 respondents, or 33.3%), and a Low Level of Compliance (8 respondents, or 26.7%).

TABLE 3. The Relationship Between Family Support and Patients' Compliance Levels in Treating Diabetic Wounds at Griya Luka Pringsewu

Family Support	Compliance Level								P-Value	Correlation Coefficient
	Low		Moderate		High		Total			
	N	%	N	%	N	%	N	%		
Insufficient	1	3,3	0	0	0	0	1	100	0,043	0,609
Adequate	3	10,0	3	10,0	1	3,3	7	100		
Good	4	13,3	9	30,0	9	30,0	22	100		
Total	8	26,6	12	40,0	10	33,3	30	100		

According to Table 3, out of 30 respondents, 10 (33.3%) had good family support and a high level of compliance, 12 (40.0%) had adequate family support and a moderate level of compliance, 8 respondents (26.6%) had Inadequate Family Support and Low Compliance. The results of the data analysis yielded values ($P = 0.043$, $r = 0.609$), which indicate a P -value < 0.05 , meaning there is a significant and strong relationship between Family Support and the Level of Patient Compliance in Managing Diabetic Wounds at Griya Luka Pringsewu.

Discussion

The results of the study indicate that the majority of respondents received good family support, while patient compliance with wound care was mostly moderate. Furthermore, the results of the Gamma test revealed a significant and strong association between family support and patient compliance with diabetes mellitus wound care.

Family support is a crucial component in the care of patients with chronic diseases, including diabetes mellitus. Family support can take the form of emotional/encouraging, instrumental, and informational support, all of which play a role in helping patients maintain consistent care.

The results of this study indicate that the majority of respondents have family support in the "good" category. This suggests that families have actively supported patients, such as by assisting with wound care, providing motivation, and reminding patients to follow care recommendations.

These findings align with a study conducted by Lahagu et al. (2025) involving 30 diabetes mellitus patients at Royal Prima Hospital in Medan, which showed that the majority of respondents (73.3%) received good family support, while only 1 respondent (3.3%) had insufficient family support (Lahagu et al., 2025). A study was also conducted by Prawesty Desy Nugraheni et al. (2024), involving 45 respondents undergoing diabetes mellitus wound care at the Kalibogor Community Health Center, which found that the majority of respondents received good family support (40 respondents, 88.9%), and the remaining 5 respondents (11.1%) received moderate family support (Prawesty Desy Nugraheni et al., 2024). Another study by Shinta et al. (2025), involving 78 respondents at the Cilandak Community Health Center, found that 41 respondents (57.6%) had good family support, while the remaining 37 respondents (47.4%) received insufficient family support (Shinta et al., 2025). This study is supported by Nurjanah et al. (2025), who demonstrated that family support plays a direct role in accelerating wound healing in patients with diabetic foot ulcers. Family support boosts patients' self-confidence and reduces stress caused by the condition.

Although the majority of respondents had good family support, several barriers still exist that may cause some respondents to fall into the "adequate" or even

“insufficient” family support categories. One key factor is uneven family knowledge, particularly among families with low educational levels or those who have never received education regarding diabetic wound care. Families who do not fully understand the importance of wound care tend to provide limited support. This aligns with research by Shepard et al. (2022), which noted that low family health literacy can reduce their ability to support diabetic patients, resulting in suboptimal support.

Based on the analysis conducted, the majority of respondents in this study exhibited moderate levels of adherence. This indicates that patient adherence to wound care remains highly variable; while most patients follow wound care recommendations, some remain inconsistent in adhering to the regimen.

This study aligns with the research by Yulia and Aripin (2023), which involved 41 respondents at the Kembiritan Community Health Center; the results showed that the majority had a good level of adherence, namely 22 respondents (53.7%), moderate compliance among 11 respondents (26.8%), and poor compliance among 8 respondents (19.5%) (Yulia & Aripin, 2023). A study conducted by Ariani et al., 2025, involving 51 respondents at the Anuntaloko Paridi General Hospital showed that 64.7% (33 respondents) were compliant with wound care, while 16 respondents (35.3%) were non-compliant with wound care (Ariani et al., 2025). Another study conducted by Aprilia and Wilinda (2024) on 30 respondents found that 16 respondents (53.3%) had moderate compliance, 8 respondents (26.7%) were compliant, and 6 respondents (20.0%) were non-compliant with care (Aprilia & Wilinda, 2024).

One factor influencing adherence to wound care is economic factors. A number of respondents stated that travel expenses, costs for additional examinations, or loss of income due to having to visit the clinic were major challenges. This study is supported by findings from Sari et al. (2022), which state that “financial problems” are a significant barrier to foot care for people with diabetes in Indonesia. Therefore, even with adequate support from family, economic constraints can hinder patients from adhering to regular wound examinations or care (Sari et al., 2022).

Although family support was largely in the “good” category, the study results indicate that patients’ adherence to diabetes wound care is still predominantly in the “moderate” category. A compliance level in the moderate category indicates that patients have performed wound care, but not consistently or not fully in accordance with recommended care standards. This suggests that patient compliance is not influenced by a single factor alone, but rather results from the interaction of various interrelated factors.

Additionally, patient compliance is also influenced by psychological and emotional aspects. Concerns about wounds that do not heal, as well as feelings of fatigue due to repeated therapy, can diminish patients’ motivation to maintain wound care. This aligns with the findings of Keakinen et al. (2018), who stated that the emotional state and psychological burden of chronic patients significantly influence health behaviors and adherence to therapy. The presence of barriers may also affect the level of adherence among respondents in this study. One such factor is age, as the majority of respondents were in the 50–70 age range. In older adults, there is a decline in physical abilities such as vision, hand strength, and mobility, making it more difficult for patients to perform wound care independently. This aligns with the research by Weller et al. (2020), which states that physical limitations in older adults play a major role in reducing adherence to diabetic wound care.

The analysis results indicate a significant association between family support and the level of patient adherence to diabetes mellitus wound care, with a p-value of 0.043 and a correlation coefficient of 0.609. This correlation coefficient indicates a strong and positive relationship, meaning that the better the family support, the higher the level of patient adherence to diabetes mellitus wound care.

This study aligns with research conducted by Yeni Yarnita et al. (2023). That study involved 35 respondents treated at the Payung Kotabaru Community Health Center and demonstrated a significant association between family support and patients' adherence to diabetes wound care. These findings underscore that family support plays a vital role in improving patient adherence during the wound care process (Yeni Yarnita et al., 2023).

Another study conducted by Suratman et al. (2023), involving 44 participants receiving care at the Kalumata Community Health Center, found a significant association between family support and patients' adherence to diabetes-related wound care. These results conclude that the greater the family support received by patients, the higher their level of adherence to their wound care (Suratman et al., 2023).

This finding aligns with health behavior theory, which states that family support acts as a reinforcing factor in shaping compliant behavior in patients (Notoatmodjo, 2017). Other studies also explain that the success of self-care in patients with chronic diseases is influenced by three main components: self-care maintenance (maintaining routine care), self-care monitoring (monitoring health status), and self-care management (making appropriate decisions regarding care). These three components are significantly influenced by support from the immediate environment, particularly the family (Riegel et al., 2021).

Conclusion

Based on the results of a study conducted at Griya Luka Pringsewu, it can be concluded that family support plays a very important role in improving diabetes patients' adherence to wound care. The majority of patients receive good family support—emotional/affectionate, instrumental, and informational—and their adherence levels tend to be moderate to high. The study results indicate a significant and positive correlation between family support and patient adherence to diabetes wound care, meaning that the better the support provided by the family, the higher the level of patient adherence to wound care. Additionally, other factors such as diabetes education, the patient's experience in managing wounds, and economic conditions also influence patient adherence. These findings underscore the importance of family involvement in the care process, as it can accelerate wound healing and prevent further complications.

It is recommended that future research explore other factors that may influence patient compliance, such as financial support, personal motivation, or more specific educational interventions, to provide a more comprehensive understanding of wound care for patients with diabetes mellitus.

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