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The Relationship Between Self-Care and Quality of Life Among Patients with Type 2 Diabetes

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ABSTRACT

Diabetes Mellitus (DM) Type II requires consistent self-care to maintain an optimal quality of life. However, DM patients often neglect self-care when they feel their condition is improving, potentially leading to a decline in their quality of life. This study aims to determine the relationship between self-care practices and the quality of life of DM Type II patients in Putuk Hamlet, Banaran Village, Kandangan District, Kediri Regency. This study used a correlational analytic design with a cross-sectional approach. The study sample consisted of 38 respondents selected using the simple random sampling technique from the population of DM Type II patients in the area. The independent variable was self-care and the dependent variable was quality of life. Data were collected using a questionnaire and analyzed using the Spearman test. The results of the study showed that the better the self-care implemented, the higher the quality of life of DM Type II patients. The Spearman test confirmed a significant relationship between self-care and the quality of life of diabetes mellitus patients, with a value of □ = 0,000 (□< α =0,05). There is a significant relationship between self-care and the quality of life of DM Type II patients. The implication is that the Kandangan Community Health Center is advised to enhance health education efforts, such as providing leaflets on self-care, as practical guides that can help patients consistently apply self-care at home to improve their quality of life.

Keywords: *Diabetes Mellitus Type II, Quality of Life, Self Care*

INTRODUCTION

Diabetes Mellitus (DM) is a chronic metabolic disorder characterized by persistent hyperglycemia resulting from defects in insulin secretion, insulin action, or both. It has become a major global public health problem due to its increasing prevalence and the serious complications that accompany the disease. The International Diabetes Federation (IDF) reports that the number of people living with diabetes continues to rise every year, with a significant proportion of cases being diabetes mellitus type 2. In Southeast Asia, Indonesia is among the countries with a high prevalence of diabetes, and most cases are classified as diabetes mellitus type 2.

The prevalence of Diabetes Mellitus in Indonesia, including in East Java Province, has shown a considerable increase in recent years. This growing trend indicates that diabetes remains a significant health burden for the community and the healthcare system. Primary healthcare facilities such as community health centers play a crucial role in the prevention, control, and management of chronic diseases, including Diabetes Mellitus. Therefore, preventive and promotive efforts at the community level need to be strengthened.

Type 2 diabetes mellitus is strongly influenced by lifestyle factors such as unhealthy dietary habits, physical inactivity, obesity, and stress. The effective management of this condition largely depends on patients' ability to carry out self-care activities, including maintaining a balanced diet, regularly monitoring blood glucose levels, adhering to prescribed medications, practicing proper foot care, and engaging in regular physical activity. Proper implementation of these self-care behaviors is crucial for achieving optimal glycemic control, preventing complications, and improving overall health outcomes.

Globally, around 589 million adults are living with diabetes, and in Indonesia, approximately 20.4 million adults are affected, underscoring the substantial public health burden of the disease. A preliminary study conducted on 17 Juni 2025 in Dusun Putuk, Desa Banaran, Kecamatan Kandangan, Kabupaten Kediri, with 10 elderly participants, found that prior to participating in exercise activities, 7 respondents had blood glucose levels below 200 mg/dL, while 3 had levels above 200 mg/dL. These results highlight the importance of managing physical activity among type 2 diabetes patients, as regular exercise can alleviate symptoms, enhance comfort, prevent complications, improve quality of life, and ultimately reduce morbidity.

However, in reality, many patients with diabetes mellitus type 2 do not practice self-care adequately. Patients often neglect self-care behaviors when they feel that their condition has improved. Irregular eating habits, lack of routine blood glucose monitoring, non-adherence to medication, lack of exercise, and poor foot care are common problems observed among individuals with diabetes. These unhealthy behaviors may lead to the development of serious complications such as cardiovascular disease, neuropathy, nephropathy, diabetic foot ulcers, and frequent hospitalization. In addition, poor self-care practices also have a negative impact on patients' quality of life.

Quality of life is an important indicator in the management of chronic diseases, including Diabetes Mellitus. Patients with poor self-care tend to experience physical limitations, psychological distress, decreased social interaction, and reduced independence in daily activities. In contrast, patients who are able to maintain good self-care behaviors are more likely to have better physical functioning, emotional well-being, social relationships, and overall life satisfaction. Therefore, improving self-care practices is essential not only for controlling blood glucose levels but also for enhancing the quality of life of patients with diabetes mellitus type 2.

Previous studies have reported a significant relationship between self-care behaviors and quality of life among patients with diabetes mellitus type 2. Nevertheless, data focusing on community settings, especially at the primary healthcare level in rural areas, remain limited. The working area of Kandangan Primary Health Care Center, particularly in Putuk Hamlet, Banaran Village, Kandangan District, Kediri Regency, is one of the communities with a considerable number of patients diagnosed with diabetes mellitus type 2. Social, economic, and cultural factors in this area may influence patients' ability to perform effective self-care.

Based on these considerations, this study aims to examine the relationship between self-care and quality of life among patients with diabetes mellitus type 2 in the working area of Kandangan Primary Health Care Center, specifically in Putuk Hamlet, Banaran Village, Kandangan District, Kediri Regency. The results of this study are expected to provide valuable information for healthcare professionals, especially nurses and primary healthcare providers, in developing appropriate educational programs and community-based interventions to improve self-care behaviors and enhance the quality of life of patients with diabetes mellitus type 2.

METHODS

The research employed a quantitative design using a correlational analytic approach with a cross-sectional design. This approach was chosen to measure and analyze the relationship between the independent variable, Self Care, and the dependent variable, Quality of Life, among diabetes mellitus type 2 patients, with both variables being measured simultaneously at a single point in time. The study was conducted in the working area of Kandangan Community Health Center, Kediri Regency, specifically focusing on Putuk Hamlet, Banaran Village, Kandangan District. Data collection took place in July 2025. The target population for this study comprised all diabetes mellitus type 2 patients residing in Putuk Hamlet, Banaran Village. The sample size consisted of 38 respondents, which was determined

using Slovin's formula based on a total population of 50 patients at the Kandangan Public Health Center with a margin of error of 5%. The respondents were selected using the Simple Random Sampling technique to ensure that every patient in the population had an equal and independent chance of being chosen. The core variables were diabetes mellitus type 2 Self Care (independent) and Quality of Life (dependent).

Data were collected using a structured questionnaire. The instrument consisted of two main sections. The first section measured the level of Self Care using the Summary of Diabetes Self-Care Activities (SDSCA) questionnaire developed by Toobert, Hampson, & Glasgow (2000), which covers adherence to diet, physical activity, blood glucose monitoring, medication, and foot care. The second section assessed the patients' Quality of Life using the Diabetes Quality of Life (DQOL) questionnaire developed by the Diabetes Control and Complications Trial Research Group. Both instruments have been validated in previous studies, showing good validity and reliability, with Cronbach's alpha values of 0.85 for the SDSCA and 0.88 for the DQOL, indicating that they are suitable for measuring self-care behavior and quality of life in patients with type 2 diabetes mellitus. Data analysis was performed statistically. Univariate analysis was conducted to describe respondent characteristics and variable distribution using frequency and percentage. For hypothesis testing, the Spearman Rank Correlation Test was used for bivariate analysis. This non-parametric test was chosen as the variables were measured on an ordinal/interval scale, assuming a non-normal distribution. The relationship was considered statistically significant if the □ -value was less than □< α =0,05.

Ethically, the research has not yet obtained approval from the relevant Ethics Committee. However, the core ethical principles, including Informed Consent, Confidentiality, and Anonymity, were planned to be strictly implemented to protect the rights and privacy of the respondents throughout the study.

RESULTS

The study involved 38 diabetes mellitus type 2 patients residing in Putuk Hamlet, Banaran Village, Kandangan District, Kediri Regency. The results are presented in three main sections: the description of the independent variable (Self Care), the description of the dependent variable (Quality of Life), and the result of the bivariate analysis.

Table 1. Respondent Characteristics Based on Self-Care Level Among Type 2 Diabetes Mellitus Patients in Putuk Hamlet, Banaran Village, Kandangan District, Kediri Regency, in July 2025

Self Care	Frequency (f)	Percentage (%)
Poor	12	31.5
Good	26	68.5
Total	38	100

Source: Primary Research Data

Table 1 shows that the majority of diabetes mellitus type 2 patients in the study exhibited a Good Self Care level, totaling 26 individuals (68.5%). Conversely, 12 respondents (31.5%) were categorized as having Poor Self Care.

Table 2. Respondent Characteristics Based on Quality of Life Among Type 2 Diabetes Mellitus Patients in Putuk Hamlet, Banaran Village, Kandangan District, Kediri Regency, in July 2025

Quality of Life	Frequency (f)	Percentage (%)
Poor	15	39.4
Good	23	60.6
Total	38	100

Source: Primary Research Data

Table 2 explains that the majority of diabetes mellitus type 2 patients had a Good Quality of Life, accounting for 23 individuals (60.6%). Meanwhile, 15 respondents (39.4%) were categorized as having a poor quality of life.

Table 3. Relationship Between Self Care and quality of life in Type 2 Diabetes Mellitus Patients.

Self Care	Quality of Life				Total	
	Poor		Good			
	f	%	f	%	N	%
Poor	10	100	0	0	10	100
Good	3	7,8	25	92,2	28	100
Total	13	34,2	25	65,8	38	100

$\rho = 0.000 < \alpha\ 0{,}05$

Table 3 shows a strong pattern: all patients with Poor Self Care (10 individuals) were also categorized as having a Poor Quality of Life (100%). Conversely, the majority of patients with Good Self Care (25 individuals, 92.2%) were found to have a Good Quality of Life.

The results of the Spearman Rank Correlation Test showed a p-value of 0.000. As this value is lower than the significance level ($\alpha = 0.05$), it can be concluded that a significant relationship exists between self-care and the quality of life among patients with Type 2 Diabetes Mellitus in the working area of Kandangan Community Health Center.

DISCUSSION

This study confirms a highly significant positive relationship between the level of Self Care and the Quality of Life among diabetes mellitus type 2 patients in Putuk Hamlet, Kandangan Community Health Center's working area. The statistical analysis, yielding a p-value of 0.000, robustly rejects the null hypothesis and establishes a strong correlation. This finding is in line with Orem's Self-Care Deficit Theory and is supported by previous studies. A study by Inge Ruth S et al. (2020) found that patients with higher self-care adherence demonstrated significantly better quality of life, particularly in the physical and psychological domains. Similarly, Mesylis et al. (2025) reported a significant association between self-care behavior and quality of life in Type 2 Diabetes Mellitus patients ($p = 0.002$), indicating that patients who consistently practiced recommended self-management behaviors tended to experience improved well-being.

The nature of this positive correlation implies that as patients become more adherent to their self-care regimen — including proper diet, regular exercise, consistent medication intake, and foot care — their Quality of Life improves. Effective self-care leads directly to optimal glycemic control. This stability reduces the incidence of acute diabetic episodes and minimizes the progression of chronic complications (e.g., neuropathy or cardiovascular damage). By mitigating these physical complications, patients experience less pain, less functional limitation, and lower associated psychosocial distress, thereby boosting their physical and psychological Quality of Life domains.

The analysis of variable distribution indicated a clear need for intervention. While most respondents (68.5%) were categorized as having good self care, cross tabulation revealed that 100% of patients classified with poor self care were concurrently categorized as having a poor quality of life. This finding highlights the direct and detrimental impact of inadequate self care practices within this community. Patients often fail to maintain routine self care because they feel their condition has "improved," which can create a dangerous cycle leading to recurrent health problems and significantly reduced quality of life.

These results are supported by previous studies conducted in Indonesia. Research at RSPAL DR. Ramelan Surabaya found a significant positive relationship between self management, measured by the Diabetes Self Management Questionnaire (DSMQ), and quality of life among type 2 diabetes patients (Sari & Nurhayati, 2022). Similarly, a study in productive age diabetic patients using the Summary of Diabetes Self-Care Activities (SDSCA) and Diabetes Quality of Life (DQoL) instruments reported that better self management was significantly associated with higher quality of life (Natasia et al., 2025). Another study across Indonesian health care settings indicated that self care behaviors directly predicted quality of life more strongly than physiological indicators such as HbA1c or BMI (Malini, Yullya, & Alhofaian, 2022). These findings underscore the importance of improving self care practices, including diet adherence, physical activity, medication compliance, blood glucose monitoring, and foot care, as a key strategy to enhance both metabolic outcomes and overall well being in type 2 diabetes patients.

The practical implication for the Kandangan Community Health Center is clear. Targeted educational interventions are urgently required for the 39.4% of the population exhibiting poor adherence. The current model of health education needs enhancement to overcome existing behavioral barriers in a rural community setting. The study strongly suggests that promoting the use of simple, portable educational media, such as leaflets or pocket guides, would serve as effective memory aids and consistent references. These tools can ensure that patients maintain comprehensive self-care practices consistently, ultimately reinforcing their sense of self-efficacy and sustaining a higher Quality of Life.

CONCLUSION

This study demonstrates a highly significant positive relationship between self-care practices and the quality of life among diabetes mellitus type 2 patients in Putuk Hamlet, Kandangan Community Health Center's working area. Patients who consistently adhere to self-care behaviors including maintaining a proper diet, engaging in regular physical activity, taking prescribed medications, and performing foot care experience better physical and psychological well-being. Conversely, inadequate self-care is directly associated with poorer quality of life, highlighting the risk of recurrent complications and diminished overall well-being.

These findings emphasize the importance of targeted health education and community-based interventions to enhance self-care adherence, particularly in rural settings. Implementing practical strategies, such as educational leaflets, pocket guides, and ongoing counseling, can support patients in maintaining comprehensive self-care practices, ultimately improving their quality of life and reducing the burden of diabetes-related complications.

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