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Email : editorijhess@gmail.com

The Relationship Between Self-Care Management And Medication Adherence Among Patients With Type 2 Diabetes Mellitus In The Working Area Of UPTD Health Center III North Denpasar

Ni Putu Novi Wulandari[1)*], Ketut Lisnawati[2)], Ni Wayan Trisnadewi[3)]
[1,2,3)] Nursing Study Program, STIKES Wira Medika Bali, Denpasar, Bali, Indonesia

*Corresponding Author
Email : ptnoviwulandari29@gmail.com

Abstract

Type 2 Diabetes Mellitus is a chronic disease that requires long-term management through the implementation of self-care management and medication adherence. Low medication adherence remains a significant problem that leads to suboptimal disease control and an increased risk of complications. This study aimed to determine the relationship between self-care management and medication adherence among patients with Type 2 Diabetes Mellitus in the working area of UPTD health center III North Denpasar. This study employed a descriptive correlational design with a cross-sectional approach. A total of 104 respondents were selected using purposive sampling. Data were collected using the Summary of Diabetes Self-Care Activities (SDSCA) questionnaire and the Morisky Medication Adherence Scale-8 (MMAS-8). Data analysis was conducted using the Spearman Rank correlation test. The results showed that most respondents had a moderate level of self-care management (67.3%) and a low level of medication adherence (57.7%). Statistical analysis revealed a p-value of 0.001 with a correlation coefficient of r = 0.554, indicating a positive and significant relationship with moderate strength. These findings indicate that improved self-care management plays an important role in enhancing medication adherence through increased patient understanding and responsibility for treatment. This study highlights the importance of self-care management education and continuous support in the management of Type 2 Diabetes Mellitus.

Keywords: Type 2 Diabetes Mellitus, Self Care Management, Medication Adherence

INTRODUCTION

The prevalence of diabetes mellitus has experienced a significant increase compared to previous years, both at the global and national levels. This condition indicates that an increasing number of individuals, including younger age groups, are at risk of developing serious complications if the disease is not managed optimally (Sasombo et al., 2021). Diabetes mellitus (DM) is a chronic disease with a continuously increasing prevalence, making it a major challenge for global public health. This disease is caused by impaired insulin production or utilization, resulting in hyperglycemia and an increased risk of various serious complications for affected individuals. The surge in diabetes mellitus cases has not only occurred in developed countries but has also become a major concern in developing countries, including Indonesia (Resmiati et al., 2025).

According to the World Health Organization (WHO) report in 2024, the number of individuals living with diabetes mellitus globally reached approximately 830 million in 2022, showing a significant increase compared to around 200 million in 1990. An increase was also observed in the prevalence of diabetes mellitus among the adult population aged 18 years and over, rising from 7% in 1990 to 14% in 2022. This condition contributes to approximately 1.6 million deaths annually, with more than 50% of deaths occurring in individuals under the age of 70 years. Meanwhile, data from the International Diabetes Federation (IDF) in 2025 indicate that Indonesia ranks fifth globally in terms of the number of diabetes mellitus cases, with an estimated 20.4 million cases in 2024.

Based on data from the Bali Provincial Health Office Profile (2024), a total of 50,845 individuals aged 15 years and over with diabetes mellitus have received health services in accordance with established standards. Tabanan Regency ranks highest with 11,031 patients, followed by Denpasar City with 10,883 patients. These data indicate that Denpasar City ranks second in the number of diabetes patients receiving health services.

Diabetes mellitus (DM) is a chronic disease that occurs due to the body's inability to produce insulin according to physiological needs or due to impaired effective utilization of insulin, resulting

in blood glucose levels exceeding normal values (Indriyani et al., 2023). Risk factors for diabetes mellitus can be classified into modifiable and non-modifiable factors. Modifiable factors include dietary patterns, levels of physical activity, quality of rest, and the individual's ability to manage stress, while non-modifiable factors include age, sex, and a family history of diabetes mellitus (Azzahra Utomo et al., 2020). In addition, population growth, high prevalence of obesity, increasing age, low physical activity, and changes in lifestyle patterns also contribute to the rising number of diabetes mellitus cases (Dharmayanti et al., 2024).

The Indonesian government has implemented various promotive and preventive programs to reduce the prevalence of diabetes mellitus, such as the Healthy Living Community Movement (GERMAS), the establishment of Integrated Non-Communicable Disease Development Posts (Posbindu PTM), health screening within the Minimum Service Standards (SPM), and the integration of chronic disease management into the National Health Insurance Program. However, the implementation of these policies is still constrained by limited funding, human resources, low community participation, and overlapping regulations between the Ministry of Health and BPJS, resulting in suboptimal effectiveness of diabetes mellitus prevention and control at the primary healthcare level (Indraswari, 2024).

Government efforts in addressing diabetes mellitus have shown progress; however, the number of cases continues to increase. This situation emphasizes the importance of an active patient role through self-care management. Self-care management is defined as a series of independent actions carried out by individuals in their daily lives to maintain health status and manage their health conditions, particularly in individuals with chronic diseases such as diabetes mellitus (Hijriana & Mardhiah, 2024). One important aspect of self-care management is medication adherence, as it is a key determinant of therapeutic success in patients with diabetes mellitus (Mae Septiana et al., 2025).

Numerous studies on self-care management among patients with diabetes mellitus have been conducted; however, most have not specifically linked it to the aspect of medication adherence. Based on a preliminary study conducted in August 2025, during the last three-month period, there were approximately 140 patients diagnosed with type 2 diabetes mellitus recorded at Health Center III North Denpasar. These data have not fully described patient conditions, as documentation regarding medication adherence and the routine implementation of self-care management practices is not yet available. Based on this description, the researcher is interested in examining the relationship between self-care management and medication adherence among patients with type 2 diabetes mellitus in the working area of UPTD Health Center III North Denpasar.

RESEARCH METHODS

Study Design

This study employed a correlational analytic design using a cross-sectional approach. Correlational analytic research aims to explore and assess the extent of the relationship between one variable and other variables, thereby providing an understanding of the interrelationships among the variables under investigation. The cross-sectional approach emphasizes data collection at a single point in time, which allows researchers to obtain a simultaneous overview of the condition of the variables and to analyze the relationships among variables at the time the study is conducted (Sugiyono, 2018).

Eligibility Criteria

Studies were included if they met the following criteria:

Population: The study population consisted of all patients diagnosed with type 2 diabetes mellitus who were registered at UPTD Health Center III North Denpasar during the last three months, totaling 140 individuals.

Setting and Time: The study was conducted in the working area of UPTD Health Center III North Denpasar, North Denpasar District, from December 5 to December 24, 2025.

Sampling Technique: A non-probability sampling method using a consecutive sampling approach was applied. All patients who met the inclusion criteria were recruited sequentially during the study period until the required sample size was achieved.

Sample Size: The total sample consisted of 104 respondents. The sample size was determined using the Slovin formula with an error tolerance of 5%.

Data Collection: Primary and secondary data were collected. The independent variable (self-care management) was measured using the Summary of Diabetes Self-Care Activities (SDSCA) questionnaire, while the dependent variable (medication adherence) was assessed using the Morisky Medication Adherence Scale (MMAS-8).

Data Analysis: Data were analyzed using a non-parametric Spearman rank correlation test with a significance level of $\alpha = 0.05$.

Inclusion Criteria: The inclusion criteria in this study consisted of patients who had been diagnosed with type 2 diabetes mellitus. Eligible participants were patients with type 2 diabetes mellitus who routinely attended follow-up visits within the working area of UPTD Health Center III North Denpasar. In addition, only patients who were willing to participate in the study and had provided written informed consent were included.

Exclusion Criteria: The exclusion criteria included patients who had physical or mental conditions, such as dementia or severe depression, that could interfere with their ability to complete the research questionnaire. Patients experiencing acute complications that required intensive medical care were also excluded. Furthermore, patients with chronic diabetic complications, including stroke, kidney disease, or heart disease, were not included in this study.

RESULTS AND DISCUSSION

Results of Data Analysis

Data analysis in this study was conducted using the Spearman Rank statistical test to determine the relationship between self-care management and medication adherence among patients with Type 2 Diabetes Mellitus in the working area of UPTD Health Center III North Denpasar. The results of data processing and analysis are presented in the following table.

Table 1. Relationship between Self-Care Management and Medication Adherence among Patients with Type 2 Diabetes Mellitus in the Working Area of UPTD Health Center III North Denpasar

Self Care Management	Medication Adherence								R	*p-value*
	High Adherence		Moderate Adherence		Low Adherence		Total			
	f	%	f	%	f	%	f	%		
Good Self-Care	0	0,0	6	100	0	0,0	6	100	0,554	0,001
Adequate Self-Care	2	2,9	36	51,4	32	45,7	70	100		
Poor Self-Care	0	0,0	0	0,0	28	100	28	100		
Total	**2**	**1,9**	**42**	**40,4**	**60**	**57,7**	**104**	**100**		

Based on the results of the statistical test presented in Table 1, the Spearman Rank test yielded a significance value of p-value = 0.001, which is smaller than $\alpha = 0.05$. These results indicate a statistically significant relationship between self-care management and medication adherence among patients with Type 2 Diabetes Mellitus. The correlation coefficient value of $r = 0.554$ indicates that the strength of the relationship between the two variables is at a moderate level. In addition, the positive direction of the correlation suggests that an increase in self-care management ability is accompanied by an increase in the level of patients' adherence to medication.

Characteristics of Patients with Type 2 Diabetes Mellitus in the Working Area of UPTD Health Center III North Denpasar Based on Age

Based on the results of the study involving 104 respondents, the majority of patients with Type 2 Diabetes Mellitus in the working area of UPTD Health Center III North Denpasar were in the age group of 56–65 years, totaling 68 respondents (65.4%). This age range falls within the late adulthood to early elderly category, which represents a phase of life associated with an increased risk of glucose metabolism disorders. The dominance of respondents in this age group indicates that Type 2 Diabetes Mellitus is more prevalent among older individuals as a result of the accumulation of risk factors throughout adulthood. These factors include lifestyle changes, decreased physical activity, and progressive degenerative processes. This finding confirms that age is an important characteristic that must be considered in the management of Type 2 Diabetes Mellitus.

Increasing age is associated with physiological changes that affect the body's ability to regulate blood glucose levels. In late adulthood and older age, there is a decline in pancreatic beta-cell function and an increase in insulin resistance, leading to suboptimal glycemic control (PERKENI, 2021). In addition to metabolic changes, the aging process is also accompanied by decreased sensory function, muscle strength, and memory, which can affect an individual's ability to independently perform self-care activities. These conditions have implications for the implementation of self-care management, such as medication adherence, dietary regulation, physical activity, and blood glucose monitoring (Lestari & Zulkarnain, 2021). As age increases, patients are also more likely to experience comorbidities, which increase treatment complexity and require better adaptive abilities in managing chronic diseases (Suryanti et al., 2025).

The results of this study are consistent with several previous studies indicating that patients with Type 2 Diabetes Mellitus are predominantly in older age groups. Findings by Kurniyawati Ningrum et al. (2020) reported that respondents aged over 60 years had a higher proportion of medication non-adherence compared to younger age groups, although statistically age was not significantly associated with adherence. This finding was linked to declining health conditions, the presence of complications, and physical limitations affecting treatment regularity. In addition, Ayunda et al. (2023) reported that more than 50% of patients were aged 55–70 years and experienced difficulties in performing self-care management due to sensory decline and low physical activity. However, Fahardianto and Rosyid (2023) stated that adult and elderly patients are still able to perform self-care management effectively if they possess adequate understanding and experience related to their disease.

According to the researchers, the dominance of respondents aged 56–65 years reflects the high burden of Type 2 Diabetes Mellitus in the elderly phase, which has the potential to affect the implementation of self-care management and medication adherence. Physical limitations, memory decline, and comorbid conditions in older age may hinder patients' consistency in performing self-care activities. This condition does not necessarily indicate low adherence, but rather illustrates greater challenges in managing chronic disease among this age group. Therefore, elderly patients with Type 2 Diabetes Mellitus require more targeted and continuous assistance. Appropriate support is expected to help patients maintain treatment regularity and optimal self-care practices.

Characteristics of Patients with Type 2 Diabetes Mellitus in the Working Area of UPTD Health Center III North Denpasar Based on Sex

Based on the results of the study involving 104 respondents, the majority of patients with Type 2 Diabetes Mellitus in the working area of UPTD Health Center III North Denpasar were male, totaling 57 respondents (54.8%). This finding indicates that, in this study area, Type 2 Diabetes Mellitus is more prevalent among males than females. The predominance of male respondents suggests differences in risk characteristics influenced by behavior and lifestyle. Men tend to have less controlled health behaviors, such as unbalanced dietary patterns, smoking habits, and irregular health

check-ups. These conditions may increase the risk of glucose metabolism disorders that contribute to the development of Type 2 Diabetes Mellitus.

Sex is one of the factors influencing health behavior and the implementation of self-care management among patients with Type 2 Diabetes Mellitus. Theoretical reviews indicate that men generally have lower levels of concern for their health compared to women, particularly in performing self-care and adhering to therapy (Suryanti et al., 2025). These differences are related to lifestyle habits, activity patterns, and attitudes toward seeking healthcare services. Men are also more likely to delay health examinations and be less consistent in long-term treatment. This condition may affect the quality of self-care management and blood glucose control.

The results of this study differ from several previous studies reporting that the majority of patients with Type 2 Diabetes Mellitus are female. Muhaymin and Andini (2023) reported that Type 2 Diabetes Mellitus was more common among women and was associated with specific risk factors such as a history of gestational diabetes, which influenced medication adherence. In addition, Irawan et al. (2022) reported that women face challenges in self-care management due to hormonal changes during menopause that affect insulin sensitivity. Similar findings were also reported by Rahman et al. (2023), stating that increased body mass index and changes in fat distribution among women contribute to the risk of Type 2 Diabetes Mellitus. These variations across studies indicate that sex distribution among patients with Type 2 Diabetes Mellitus is influenced by regional characteristics, health behaviors, and biological factors.

According to the researchers, the higher proportion of male respondents in this study reflects the health behavior patterns of the community in the working area of UPTD Health Center III North Denpasar. The tendency toward low consistency in routine health check-ups and self-care practices is suspected to contribute to medication adherence levels and the effectiveness of self-care management among male patients. These findings indicate that male patients face specific challenges in managing Type 2 Diabetes Mellitus. Therefore, health education strategies and interventions should be designed by considering sex-based characteristics to improve effectiveness. Such approaches are expected to enhance patient participation in self-care and sustained adherence to therapy.

Characteristics of Patients with Type 2 Diabetes Mellitus in the Working Area of UPTD Health Center III North Denpasar Based on Education

Based on the results of the study, the majority of respondents with Type 2 Diabetes Mellitus in the working area of UPTD Health Center III North Denpasar had a final education level of senior high school or equivalent, totaling 59 respondents (56.7%). This finding indicates that most respondents had a secondary education level, which is a common characteristic among adults and elderly populations in the community served by the public health center. Education level is one of the factors that can influence how individuals receive and understand health information, including treatment recommendations. However, this result should not be interpreted as an indicator of respondents' abilities or limitations in managing their disease. In this study, the highest level of education reflects respondents' formal background as an initial context for understanding self-care behaviors and medication adherence.

Education is a factor that influences an individual's ability to receive, understand, and process health information. Theoretical reviews explain that education plays a role in shaping health attitudes and behaviors, although it does not always reflect a person's specific knowledge about a particular disease (Lestari & Zulkarnain, 2021). Formal education provides a cognitive foundation that facilitates individuals' understanding of health education provided by healthcare professionals. However, the formation of self-care management behaviors is not solely determined by formal education, but also by experience, environment, and continuous health education (Suryanti et al., 2025). Thus, education functions as a supporting factor in the management of Type 2 Diabetes Mellitus.

The results of this study are consistent with findings by Rahman et al. (2023), who stated that education level plays a role in shaping self-care management behaviors through increased openness to information regarding diabetes management. Adequate education facilitates patients' ability to seek,

understand, and apply self-care information. However, Fahardianto and Rosyid (2023) showed that formal education level does not always have a significant relationship with self-care management, as it is also influenced by illness experience and health education received. In terms of medication adherence, a journal from ijmps.id reported a relationship between education level and medication adherence, where higher education facilitated understanding of therapy. These differing results indicate that education acts as a supporting factor that works alongside other factors.

Characteristics of Patients with Type 2 Diabetes Mellitus in the Working Area of UPTD Health Center III North Denpasar Based on Occupation

Based on the study results, the majority of respondents with Type 2 Diabetes Mellitus in the working area of UPTD Health Center III North Denpasar were employed, with the largest group consisting of self-employed individuals or traders, totaling 28 respondents (26.9%). This finding indicates that most respondents were still engaged in daily work activities. Employment status reflects differences in physical activity demands, economic responsibilities, and time management among individuals. These conditions may influence lifestyle patterns, such as meal regularity, rest periods, and adherence to treatment. For patients with Type 2 Diabetes Mellitus, this situation is important because disease management requires consistent routines.

Occupation is one of the factors influencing health behavior and the implementation of self-care management among patients with Type 2 Diabetes Mellitus. Theoretical reviews explain that the type of occupation is related to physical activity levels, lifestyle patterns, and individuals' ability to allocate time for self-care (Suryanti et al., 2025). Working individuals often face time constraints and activity burdens that may affect treatment regularity. Conversely, unemployed individuals may be at risk of low physical activity, which can impact metabolic conditions (Lestari & Zulkarnain, 2021). Thus, employment status serves as a supporting factor influencing self-care management and medication adherence.

The results of this study are consistent with findings by Mae Septiana et al. (2025b), who reported that most patients with Type 2 Diabetes Mellitus were employed, and that employment status was related to medication adherence regularity. Work activities were found to influence patients' ability to consistently manage medication schedules. In terms of self-care management, Irawan et al. (2022) reported that employment status is associated with physical activity patterns and lifestyle management. However, Fahardianto and Rosyid (2023) reported different results, indicating that a higher proportion of respondents were unemployed and that this was associated with low physical activity levels. These differing findings indicate that employment status influences diabetes management through different mechanisms across groups.

According to the researchers, the employment status of patients with Type 2 Diabetes Mellitus in the working area of UPTD Health Center III North Denpasar should be understood contextually and not merely as a risk factor. Field observations indicate that working respondents, particularly those in self-employment and informal sectors, experience time limitations due to daily work activities, resulting in limited planned physical activities such as exercise. This condition may affect the consistency of self-care management implementation, including medication adherence and lifestyle management. Meanwhile, unemployed respondents face challenges such as low physical activity and less structured daily routines. These conditions indicate that each employment status presents unique challenges in managing Type 2 Diabetes Mellitus. Therefore, health education and assistance approaches should be tailored to patients' occupational conditions to optimize self-care management and medication adherence.

Characteristics of Patients with Type 2 Diabetes Mellitus in the Working Area of UPTD Health Center III North Denpasar Based on Duration of Diabetes

Based on the study results, the majority of respondents with Type 2 Diabetes Mellitus in the working area of UPTD Health Center III North Denpasar had been living with diabetes for ≤5 years, totaling 59 respondents (56.7%). This finding indicates that most respondents were in the early phase of the disease trajectory. During this phase, patients are generally still adapting to their condition and required treatment. Limited experience may influence patients' ability to optimally perform self-care. Duration of diabetes is an important characteristic related to the quality of self-care management and medication adherence.

The duration of diabetes reflects the length of time since patients were first diagnosed until the study was conducted and is related to the adaptation process to chronic disease. Theoretical reviews explain that the longer individuals live with diabetes, the more developed their understanding of the disease, treatment, and importance of self-care (PERKENI, 2021). Patients with longer disease duration generally have more experience in recognizing symptoms and managing therapy independently. Conversely, patients with shorter disease duration are still in the learning and adjustment phase related to lifestyle changes (Lestari & Zulkarnain, 2021). These conditions affect the consistency of self-care management and medication adherence.

The results of this study are consistent with findings by Fahardianto and Rosyid (2023), which showed that most respondents had been living with diabetes for less than five years and were in the process of developing self-care management. That study explained that patients with longer disease duration tended to have better understanding and self-care habits than newly diagnosed patients. This finding is supported by Sucipto Dwitanta (2024), who reported that most respondents had lived with Type 2 Diabetes Mellitus for 5–10 years, describing diabetes as a chronic disease with a long-term course. Rahman et al. (2023) also reported that an average diabetes duration of approximately five years was associated with patients' self-care practices. Collectively, these findings indicate that disease duration plays a role in patients' adaptation processes to disease management.

The researchers conclude that the dominance of respondents with a diabetes duration of ≤5 years highlights the importance of the early disease phase in shaping self-care behaviors and medication adherence. During this phase, patients are still adapting to the disease and treatment, requiring continuous assistance and health education to strengthen understanding and self-care skills. Limited experience in managing chronic disease may hinder consistent self-care practices without adequate support. The early disease phase also represents a strategic period for establishing proper self-care habits from the outset. Therefore, the role of healthcare professionals is crucial in supporting patient adaptation to ensure optimal and sustainable diabetes management.

Self-Care Management among Patients with Type 2 Diabetes Mellitus in the Working Area of UPTD Health Center III North Denpasar

Based on the study results, most respondents with Type 2 Diabetes Mellitus in the working area of UPTD Health Center III North Denpasar had self-care management categorized as moderate, totaling 70 respondents (67.3%). This finding indicates that respondents have performed self-care activities in daily life, although implementation has not been fully optimal. The moderate category reflects that respondents understand several important aspects of diabetes management; however, consistency and completeness of self-care practices vary among individuals. This condition is evident in respondents' behaviors related to dietary regulation, physical activity, blood glucose monitoring, and medication adherence.

Self-care management refers to actions taken by individuals to maintain their health, particularly among patients with diabetes, through continuous self-care processes. Theoretical reviews explain that self-care management plays an important role in maintaining metabolic control, regulating blood glucose levels, and preventing acute and chronic complications resulting from prolonged hyperglycemia (Silalahi et al., 2021). Self-care management includes dietary regulation, physical activity, blood glucose monitoring, medication adherence, and foot care. These self-care processes are

performed throughout the lives of patients with diabetes as part of adaptation to chronic disease. Patients' level of understanding and consistency are important factors in determining the quality of self-care management.

The results of this study are consistent with findings by Hendra et al. (2024), which showed that most patients with Type 2 Diabetes Mellitus were in the moderate self-care management category. That study explained that patients understood and practiced some self-care aspects, but consistency remained a major challenge, particularly in dietary regulation, physical activity, and blood glucose monitoring. Similar findings were reported by Surya Raditya et al. (2022), who stated that diabetes patients' self-care management was mostly at a moderate level due to daily lifestyle habits and incomplete understanding of the disease. Both studies emphasize that the moderate category emerges when patients have basic awareness and knowledge but are unable to consistently maintain self-care behaviors. These consistent findings indicate that moderate self-care management represents a common transitional phase experienced by patients with Type 2 Diabetes Mellitus before achieving optimal self-management.

The researchers believe that moderate self-care management reflects respondents' awareness of the importance of self-care in managing Type 2 Diabetes Mellitus. However, inconsistent implementation may affect disease control and long-term blood glucose stability. Established habits, incomplete understanding, and limited environmental support present challenges in improving self-care quality. This condition indicates that patients still require continuous assistance and health education. Educational and supportive approaches are expected to encourage improvement in self-care management from moderate to good categories among patients with Type 2 Diabetes Mellitus.

Medication Adherence among Patients with Type 2 Diabetes Mellitus in the Working Area of UPTD Health Center III North Denpasar

The study results show that among 104 respondents, the majority of patients with Type 2 Diabetes Mellitus had low medication adherence, totaling 60 respondents (57.7%). This finding indicates that more than half of the respondents had not consistently followed pharmacological therapy according to healthcare recommendations. Medication adherence is a key component in controlling blood glucose levels and preventing long-term complications in diabetes mellitus. Low adherence can lead to instability in patients' metabolic conditions. This condition indicates that the management of Type 2 Diabetes Mellitus continues to face challenges in terms of treatment adherence.

The results of this study are consistent with findings by Husna et al. (2022), who reported that most patients with Type 2 Diabetes Mellitus had low medication adherence, with a percentage of 61.2%. That study also showed a significant relationship between medication adherence and blood glucose levels ($p = 0.000$), emphasizing the direct impact of non-adherence on disease control. Similar findings were reported by Puspitasari et al. (2022), who found that 60% of respondents were in the low adherence category, which was associated with blood glucose levels and quality of life. The consistency of findings across studies indicates that low medication adherence is a persistent problem among patients with Type 2 Diabetes Mellitus in various regions. This condition confirms that adherence to pharmacological therapy remains a major challenge in diabetes management.

The researchers believe that low medication adherence among respondents is related to the nature of Type 2 Diabetes Mellitus as a chronic disease that often does not cause noticeable symptoms in its early stages. Field observations suggest that this may reduce patients' perception of the urgency of regular medication intake, particularly when no disruptive symptoms are present. Inconsistent adherence to therapy may reduce treatment effectiveness. Patients who struggle to maintain long-term treatment routines tend to exhibit lower adherence levels. These findings highlight the importance of health education approaches that emphasize understanding the benefits of consistent medication adherence in managing Type 2 Diabetes Mellitus.

Relationship between Self-Care Management and Medication Adherence among Patients with Type 2 Diabetes Mellitus in the Working Area of UPTD Health Center III North Denpasar

Based on the results of the Spearman Rank test analysis, a p-value of 0.001 was obtained, indicating a significant relationship between self-care management and medication adherence among patients with Type 2 Diabetes Mellitus. The correlation coefficient value of 0.554 indicates a moderate relationship with a positive direction. This finding shows that respondents with better self-care management abilities tend to have higher levels of medication adherence. This positive relationship reflects that self-care behaviors play a role in supporting patients' consistency in undergoing pharmacological therapy. The results confirm that successful management of Type 2 Diabetes Mellitus is determined not only by medication but also by patients' ability to independently manage their care.

Based on questionnaire responses, most respondents had self-care management categorized as moderate. The most dominant self-care management aspects performed by respondents included medication adherence and light physical activity. Respondents generally reported taking medication as recommended and performing simple physical activities such as walking. The dominance of these behaviors is related to respondents' characteristics, most of whom were aged 56–65 years, making light physical activity more feasible than high-intensity exercise. This condition indicates respondents' basic awareness of the importance of medication and physical activity in diabetes management.

Several aspects of self-care management showed low implementation levels, particularly blood glucose monitoring and foot care. Most respondents rarely performed independent blood glucose checks or visited healthcare facilities according to recommendations. Low monitoring implementation was associated with limited access to monitoring devices, dependence on scheduled visits, and the perception that monitoring is only necessary when symptoms occur. Foot care was also rarely performed because respondents had not yet experienced foot injuries or disorders. This pattern indicates that respondents' self-care management remains oriented toward reactive care rather than preventive efforts to avoid complications.

Regarding medication adherence, most respondents were in the low adherence category. Although many respondents reported routinely taking medication and had taken medication on the previous day, behaviors that reduced adherence levels were still observed. Respondents often forgot to bring medication when traveling, forgot to take medication, or reduced or discontinued medication without consulting healthcare professionals. This pattern shows that medication adherence is not only related to consumption frequency but also to behavioral consistency under various conditions. This reflects a gap between knowledge and comprehensive adherence behavior implementation.

Self-care management is a continuous process encompassing dietary regulation, physical activity, blood glucose monitoring, medication adherence, and complication prevention among patients with diabetes mellitus (Silalahi et al., 2021). Medication adherence is a key component of self-care management because it directly contributes to maintaining stable blood glucose levels (PERKENI, 2021). Non-adherence to medication can result in suboptimal disease control despite therapy provision. Based on theoretical frameworks, self-care management and medication adherence are understood as mutually supportive components in achieving optimal control of Type 2 Diabetes Mellitus.

The findings of this study are related to previous research, although the variables used are not entirely the same. Husna et al. (2022) showed that medication adherence is associated with blood glucose control among patients with Type 2 Diabetes Mellitus, indicating the important role of adherence behavior in disease management success. Puspitasari et al. (2022) also reported that medication adherence is associated with quality of life among patients with diabetes, reflecting the impact of adherence behavior on overall health conditions. Meanwhile, studies on self-care management indicate that good self-care abilities contribute to patients' consistency in treatment adherence and health monitoring. These interrelated findings indicate that self-care management and medication adherence are part of an integrated set of disease management behaviors that mutually support each other in Type 2 Diabetes Mellitus.

The researchers conclude that the positive relationship between self-care management and medication adherence reflects patients' level of involvement in managing chronic disease. Patients with better understanding and self-care skills tend to have greater awareness of the benefits of long-term therapy. However, moderate self-care management has not been fully accompanied by optimal medication adherence, as some self-care aspects are still inconsistently performed. This condition indicates that improvements in self-care management must be comprehensive, encompassing not only treatment but also preventive aspects. Strengthening continuous education has the potential to improve disease management quality and reduce the risk of complications in Type 2 Diabetes Mellitus.

CONCLUSION

This study aimed to analyze the relationship between self-care management and medication adherence among patients with Type 2 Diabetes Mellitus in the working area of UPTD Health Center III North Denpasar. Based on the results of data analysis and discussion, it can be concluded that the characteristics of respondents indicate that most patients with Type 2 Diabetes Mellitus were aged 56–65 years, totaling 68 individuals (65.4%), with a predominance of male respondents amounting to 57 individuals (54.8%). In terms of education level, the majority of respondents had completed senior high school or equivalent education, totaling 59 individuals (56.7%). Regarding occupation, most respondents worked as self-employed individuals or traders, totaling 28 individuals (26.9%). In addition, based on the duration of diabetes, most respondents had been living with diabetes for ≤5 years, totaling 59 individuals (56.7%) out of a total of 104 respondents (100%).

The identification of self-care management levels showed that most patients with Type 2 Diabetes Mellitus were in the moderate category, totaling 70 respondents (67.3%). Meanwhile, the identification of medication adherence levels indicated that the majority of respondents had low medication adherence, totaling 60 respondents (57.7%). This condition indicates that although most respondents had moderate self-management abilities, medication adherence remains an issue that requires attention.

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