
Relationship the Five Pillars of Diabetes Mellitus Management with the Quality Life of Diabetes Mellitus Patients

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ABSTRACT

Diabetes mellitus is a chronic metabolic disease characterized by elevated blood glucose levels in the body. The incidence of diabetes mellitus continues to rise across all sectors of society, necessitating control efforts to prevent further increases each year. The management of diabetes mellitus is categorized into five pillars: education, physical activity, dietary regulation, self-monitoring of blood glucose levels, and adherence to antidiabetic medication. These five pillars aim to help individuals with diabetes control their blood glucose levels, thereby improving their quality of life. This study aims to analyze the relationship between the five pillars of diabetes mellitus management and the quality of life of people with diabetes. A quantitative research method with a cross-sectional design was used, involving 72 respondents selected through purposive sampling. Data for the independent variables were collected using a five-pillar diabetes management questionnaire, while the dependent variable was measured using the Diabetes Quality of Life (DQOL) questionnaire. Data were analyzed using the Spearman Rank test. The result showed that most respondents had good five-pillars management and a good quality of life, with 42 people (58,3%). The test result showed a p-value = 0,000 and an r-value = 0,761, indicating a strong relationship between the five pillars of management and the quality of life of diabetes mellitus patients.

Keywords: Diabetes mellitus, five pillars, quality of life

INTRODUCTION

Diabetes mellitus is a chronic metabolic disease characterized by an increase in blood glucose levels in the body, which over time can cause serious damage to other vital organs such as the heart, blood vessels, eyes, kidneys, and nerves (18). The majority of diabetes mellitus cases in Indonesia are caused by an unhealthy lifestyle and lack of physical activity. These two factors can disrupt the body's ability to metabolize glucose into energy. This occurs because body cells are resistant to insulin or the amount of circulating insulin is insufficient, preventing glucose from being absorbed by the cells, thus leading to an increase in glucose levels (23). According to the World Health Organization (WHO), in 2019 there were 422 million people worldwide suffering from diabetes, the majority living in low- and middle-income countries. Every year, there are 1.5 million deaths due to diabetes mellitus, which has led to an increase in cases and prevalence over the past few decades. According to the

International Diabetes Federation (IDF), in 2021 the global prevalence of diabetes in individuals aged 20-79 was estimated at 10.5% (536.6 million people), increasing to 12.2% (783.3 million) by 2045. Indonesia is the fifth country with the largest number of sufferers in the world, with 19.5 million Indonesians aged 20-79 having the disease (9).

The increasing number of diabetes mellitus patients can indirectly trigger various diseases and increase the risk of death due to the complications it causes. Diabetes mellitus complications can be acute or chronic. Acute complications occur when blood sugar levels rise or fall drastically in a short period of time. Chronic complications involve damage to blood vessels, which can eventually lead to heart disease, kidney disorders, nerve damage, stroke, and various other diseases (16).

The success of managing the five pillars of diabetes is essential to improve patients' quality of life. Quality of life in patients with diabetes mellitus is a perception or subjective view of the patient regarding the satisfaction experienced, both in terms of physical ability (daily activities, rest, sleep), psychological state, social relationships (social support and sexual activity), and environment (health environment, opportunities to obtain information, skills, recreational opportunities, and free time). Good management of the five pillars of diabetes mellitus will improve quality of life. In reality, many diabetes patients still experience failure in managing the five pillars of diabetes mellitus management (8, 13). Previous research conducted by Rahmawati et al (20) on patients with diabetes mellitus at Danau Indah Health Center found that the majority of diabetes patients had received education and adhered to medication therapy and physical activity. However, many diabetes patients still did not comply with diet management and blood glucose level examination.

The results of the preliminary study found that the prevalence of diabetes mellitus in the working area of UPT Puskesmas Grogol in 2024 was 4,660 people, while in the Pondok Village area it was 288 people. Grogol Subdistrict ranks second in the number of diabetes patients after Kartasura Subdistrict. Results from interviews with several patients showed that public understanding among diabetes mellitus patients regarding the five pillars of DM management is still low. Most patients only follow treatment according to the doctor's prescription, but neglect other important aspects such as regular exercise, self-monitoring of blood sugar, and meal planning. Some patients admitted that they have never received formal education regarding comprehensive diabetes management, especially males. This condition affects suboptimal disease management, which ultimately influences their quality of life, such as persistent physical complaints and limitations in daily activities.

Based on this background, the success of managing the five pillars of diabetes mellitus is highly expected; the better the management, the better the level of success and quality of life. Therefore, the researcher is interested in conducting a study on the relationship between the management of the five pillars of diabetes mellitus and the quality of life of diabetes mellitus patients.

METHODS

The type of research used is quantitative research with a cross-sectional approach method. The sampling technique in this study is non-probability sampling, specifically purposive sampling, where respondents meet the inclusion criteria. The population in this study consists of 288 diabetes mellitus patients in Pondok village, and using the Vincent formula, a sample of 72 people was obtained. The instruments used in this study were the

five-pillar diabetes mellitus management questionnaire, which has been tested for validity and reliability, and the Diabetes Quality of Life (DQOL) questionnaire.

RESULTS

This research was conducted at the Dahlia Posyandu, Pondok Village in May-June 2025.

Table 1 Distribution of Respondent Demographic Data (n = 72, May-June, 2025)

| No. | Characteristics | F | % |
|-----|-----------------------------------|----|------|
| 1. | Age | | |
| | 50-59 Years | 22 | 30,6 |
| | 60-69 Years | 35 | 48,6 |
| | 70-79 Years | 13 | 18,1 |
| | 80-89 Years | 2 | 2,8 |
| 2. | Gender | | |
| | Male | 12 | 16,7 |
| | Female | 60 | 83,3 |
| 3. | Education | | |
| | No School | 9 | 12,5 |
| | Elementary School | 49 | 68,1 |
| | Junior High School | 14 | 19,4 |
| 4. | Occupation | | |
| | Unemployed | 46 | 63,9 |
| | Laborer | 10 | 13,9 |
| | Trader | 14 | 19,4 |
| | Others | 2 | 2,8 |
| 5. | Living With | | |
| | Husband | 12 | 18,1 |
| | Wife | 3 | 4,2 |
| | Family | 20 | 27,8 |
| | Children | 36 | 50,0 |
| 6. | Duration of Illness | | |
| | <5 Years | 45 | 62,5 |
| | 5-10 Years | 20 | 27,8 |
| | >10 Years | 7 | 9,7 |
| 7. | Complications | | |
| | None | 38 | 52,8 |
| | Hypertension | 23 | 31,9 |
| | Vision Disorders | 1 | 1,4 |
| | Hypertension and Stroke | 3 | 4,2 |
| | Hypertension and Vision Disorders | 7 | 9,7 |
| 8. | Routine Medication | | |
| | Yes | 63 | 87,5 |
| | No | 9 | 12,5 |

Based on the table, it was found that out of 72 respondents, the majority were aged 60-69 years, totaling 35 people (48.6%). In terms of gender, there were 12 males (16.7%) and 60 females (83.3%). Based on the last education level, the majority graduated from elementary school, totaling 49 people (68.15%). Based on occupation, the majority were unemployed, totaling 46 people (63.9%), laborers 10 people (13.9%), and traders 14 people (19.4%). Regarding living arrangements, most lived with their children, totaling 32 people (50%). The majority of respondents had diabetes for less than 5 years, totaling 45 people with a percentage of 62.5%. From complication data, the most common was hypertension, totaling 23 people (31.9%). The majority of respondents regularly took antidiabetic medication, totaling 63 people (87.5%).

Table 2 Characteristics of the Five Pillars DM Variables (n = 72, May-June, 2025)

| Types of Pillars | | F | % |
|--------------------------|------|----|------|
| Physical Activity | Less | 40 | 51,9 |
| | Good | 32 | 41,6 |
| Diet Therapy | Less | 7 | 9,1 |
| | Good | 65 | 84,4 |
| Medication Therapy | Less | 11 | 14,3 |
| | Good | 61 | 79,2 |
| Self Blood Sugar Control | Less | 31 | 40,3 |
| | Good | 41 | 53,2 |
| Education | Less | 48 | 62,3 |
| | Good | 24 | 31,2 |

Based on Table 4.2, it shows that the physical activity pillar is lacking in 40 people (51.9%), the dietary therapy is good in 65 people (84.4%), and in drug therapy, the majority have good management, totaling 61 people (79.2%). The pillar of self-monitoring blood sugar is mostly good, with 41 people (53.2%), whereas the education pillar is still in the low category, with 48 people (62.3%).

Table 3 Frequency Distribution of the Five Pillars of DM Management (n = 72, May-June, 2025)

| Five Pillars of DM Management | F | % |
|-------------------------------|----|------|
| Poor | 25 | 34,7 |
| Good | 47 | 65,3 |
| Total | 72 | 100 |

Based on the table, data were obtained from 72 respondents, the majority had good management of the five pillars, totaling 47 people (65.3%), and those with less good management totaled 25 people (34.7%).

**Table 4 Frequency Distribution of Quality of Life of DM Patients
 (n = 72, May-June, 2025)**

| Quality of Life | <i>F</i> | % |
|-----------------|----------|------|
| Poor | 27 | 37,5 |
| Good | 45 | 62,5 |
| Total | 72 | 100 |

Based on the table, data was obtained from 72 respondents, the majority having a good quality of life totaling 45 people (62.5%) and those having a less good quality of life totaling 27 people (37.5%).

Table 5 Relationship Between Physical Activity and Quality of Life

| Physical Activity | Quality of Life | | | | | | p-value | Rho |
|-------------------|-----------------|------|------|------|-------|------|---------|-------|
| | Less | | Good | | Total | | | |
| | f | % | F | % | F | % | | |
| Lack | 20 | 27,8 | 20 | 27,8 | 40 | 55,6 | 0,014 | 0,289 |
| Good | 7 | 9,7 | 25 | 34,7 | 32 | 44,4 | | |
| Total | 27 | 37,5 | 45 | 62,5 | 72 | 100 | | |

Table 6 The Relationship Between Diet Therapy and Quality of Life

| Diet Therapy | Quality of Life | | | | | | p-value | Rho |
|--------------|-----------------|------|------|------|-------|------|---------|-------|
| | Less | | Good | | Total | | | |
| | f | % | F | % | F | % | | |
| Poor | 7 | 9,7 | 0 | 0 | 7 | 9,7 | 0,000 | 0,424 |
| Good | 20 | 27,8 | 45 | 62,5 | 65 | 90,3 | | |
| Total | 27 | 37,5 | 45 | 62,5 | 72 | 100 | | |

Table 7 Relationship Between Drug Therapy and Quality of Life

| Drug Therapy | Quality of Life | | | | | | p-value | Rho |
|--------------|-----------------|------|------|------|-------|------|---------|-------|
| | Less | | Good | | Total | | | |
| | f | % | F | % | F | % | | |
| Poor | 9 | 12,5 | 2 | 2,8 | 11 | 15,3 | 0,001 | 0,389 |
| Good | 18 | 25,0 | 43 | 59,7 | 61 | 84,7 | | |
| Total | 27 | 37,5 | 45 | 62,5 | 72 | 100 | | |

Table 8 The Relationship of KGDM with Quality of Life

| KGDM | Quality of Life | | | | | | p-value | Rho |
|-------|-----------------|------|------|------|-------|------|---------|-------|
| | Less | | Good | | Total | | | |
| | f | % | F | % | F | % | | |
| Less | 23 | 31,9 | 8 | 11,1 | 31 | 43,1 | 0,000 | 0,659 |
| Good | 4 | 5,6 | 37 | 51,4 | 41 | 56,9 | | |
| Total | 27 | 37,5 | 45 | 62,5 | 72 | 100 | | |

Table 9 The Relationship Between Education and Quality of Life

| Education | Quality of Life | | | | | | p-value | Rho |
|-----------|-----------------|------|------|------|-------|------|---------|-------|
| | Less | | Good | | Total | | | |
| | F | % | F | % | f | % | | |
| Less | 26 | 36,1 | 22 | 30,6 | 48 | 66,7 | 0,000 | 0,487 |
| Good | 1 | 1,4 | 23 | 31,9 | 24 | 33,3 | | |
| Total | 27 | 37,5 | 45 | 62,5 | 72 | 100 | | |

Based on the table, the results of the statistical test using the Spearman rank test show that all five pillar aspects have a p-value <0.05, which means they are significant, and all aspects also have a strength ranging from medium to strong with a positive direction of the relationship.

Table 10 Cross Distribution of the Relationship Between Two Variables

| Five Pillars | Quality of Life | | | | | | p-value | Rho |
|--------------|-----------------|------|------|------|-------|------|---------|-------|
| | Less | | Good | | Total | | | |
| | F | % | F | % | F | % | | |
| Poor | 22 | 30,6 | 3 | 4,2 | 25 | 34,8 | 0,000 | 0,761 |
| Good | 5 | 6,9 | 42 | 58,3 | 47 | 65,2 | | |
| Total | 27 | 37,5 | 45 | 62,5 | 72 | 100 | | |

Based on the table, it shows that out of 72 respondents, there are 20 (27.8%) respondents who have low physical activity and also poor quality of life. Meanwhile, respondents who have good physical activity and good quality of life total 25 people (34.7%). Statistical test results using the Spearman rank test obtained a p-value of 0.014 and a rho value of 0.289, which means there is a weak positive relationship between physical activity and quality of life.

DISCUSSION

Based on the table, the researcher obtained research results that the majority of diabetes mellitus patients were aged 60-69 years totaling 35 people (48.6%), aged 50-59 years totaling 22 people (30.6%), aged 70-79 years totaling 13 people (18.1%), and aged 80-89 years

totaling 2 people (2.8%). Research conducted by Utami et al. (25) showed that elderly individuals aged 60-69 years, 55.6% had a moderate physical activity category, and 54.2% of the elderly had a high quality of life. The risk of diabetes tends to increase with age, especially in individuals over 40 years old (11). This is caused by the aging process that leads to a decrease in pancreatic beta-cell function in producing insulin.

Based on the table, gender is divided into two categories, namely female and male. It can be seen that the number of female respondents is higher, namely 60 people (83.3%), and male respondents totaled 12 people (16.7%). Research conducted by Islamsiasih (10) showed that the majority of diabetes mellitus patients were female, with a percentage of 8.6% female and 91.4% male. Consistent with previous research, the results obtained show that the majority of diabetes mellitus patients were female, totaling 27 people (64.3%) out of 42 respondents. Females have a greater tendency to experience central obesity and an increase in body mass index compared to males, thus physiologically being at a higher risk of suffering from diabetes mellitus (17).

Based on the table, education is divided into three categories: no schooling, elementary school (SD), and junior high school (SMP). The majority of respondents have an elementary school education, totaling 49 people (68.1%), junior high school education, totaling 14 people (19.4%), and no schooling, totaling 9 people (12.5%). According to research by Amalia & Roissiana (2), it shows that there is no significant relationship between education level and diabetes prevention behavior. Respondents with higher education totaling 110 people (90.9%) who carry out diabetes mellitus prevention with good category is only 14%. The same research conducted by Nisa & Kurniawati (15) showed results indicating no significant relationship between the level of education and the quality of life of diabetes mellitus patients. Respondents with no formal education or only elementary school education were the largest group, totaling 94 people (57.7%). Individuals with higher education levels are generally expected to have broader knowledge, but this is not always absolute, because a person with low formal education does not necessarily have a low level of knowledge. Knowledge is obtained not only through formal channels but also through non-formal ones.

Based on the table, employment is divided into four categories, with the largest number being unemployed, 46 people (63.9%), traders 14 people (19.4%), laborers 10 people (13.9%), and other jobs 2 people (2.8%). This study is in line with previous research, which found that out of a total of 30 respondents, 21 people were employed (70%) and 9 people were unemployed (30%). Previous research showed that there was no significant relationship between employment and medication adherence for patients with diabetes mellitus at Tamamaung Health Center. A total of 55 respondents (70.6%) in the working category (civil servants and housewives) had a low adherence category (24). Employment affects the risk of developing diabetes mellitus; jobs with low physical activity can lead to insufficient energy burning, which can increase body weight and pose a high risk of diabetes mellitus (14).

Based on the table of duration of suffering from diabetes mellitus, there are three categories: the majority <5 years as many as 45 people (62.5%), 5-10 years as many as 20 people (27.8%), >10 years as many as 7 people (9.7%). Based on the research results of Hartono & Ediyono (7), it was found that most of the duration of suffering in patients with diabetes mellitus falls in the category of less than 4 years as many as 70 people (62.5%). The same results were also obtained in previous research by Kriswiastiny et al (12), which showed the average duration of suffering from diabetes mellitus to be more than 1 year, with the

duration of DM more than 1 year as many as 57 people (68.7%) and less than 1 year as many as 26 people (31.3%).

Based on the complication table, the majority of respondents did not have complications, totaling 38 people (52.8%), hypertension in 23 people (31.9%), hypertension and vision disorders in 7 people (9.7%), hypertension with stroke in 3 people (4.2%), and vision disorders alone in only 1 person (1.4%). According to Aliandu et al. (1), the study results showed that out of 57 respondents, most had good self-care, totaling 23 people (40.3%), and most did not experience complications, totaling 30 people (52.6%). This study is in line with research conducted by Fortuna et al. (6), which showed that hypertension had the highest percentage, mostly experienced by diabetes mellitus patients (41%).

Based on the five-pillar table, it was found that 47 people (65.3%) had good management and 25 people (34.7%) had poor management. These results indicate that the majority of diabetes mellitus patients in Pondok Village fall into the good category. This study is in line with the research of Florentina (5), which stated that patient self-care is in a good category because patients follow dietary therapy, take medications as prescribed by doctors, regularly engage in physical activity, routinely monitor blood sugar levels, and perform foot care. This study is also supported by research conducted by Rahmawati et al. (20), where the majority of respondents adhered to the four pillars of diabetes management. This greatly depends on self-management or self-control; the better the self-management carried out, the more obedient the respondents are in following the four pillars of diabetes management.

This study is also supported by research from Marbun et al. (13), which shows that respondents who properly implemented the five pillars were 23 respondents with a percentage of (57.5%), while those who did not implement the five pillars properly were 17 respondents with a percentage of (42.5%). The management of the five pillars of diabetes mellitus, which includes: education, nutritional fulfillment, physical exercise (physical activity), pharmacological therapy, and blood sugar monitoring. The implementation of the five pillars of diabetes mellitus can be carried out properly if the patients are willing and able to apply all five pillars correctly. Respondents who had poor management of the five pillars totaled 25 people; this occurred because they only carried out several points of the five pillars of diabetes mellitus management.

The research results are in line with the study conducted by Prawinda et al (18), which showed that the community has not fully implemented the five pillars of diabetes optimally. The interview results indicated that the majority of people only carry out some of these five pillars, such as engaging in physical activity and controlling their diet, but do not take antidiabetic medication or vice versa. The category of good five pillars occurs because patients show compliance in managing their diet, taking medication according to medical instructions, exercising regularly, monitoring blood sugar levels periodically, and actively participating in education or counseling activities related to diabetes management.

Based on the data, the results showed that 45 people (62.5%) had a good quality of life and 27 people (37.5%) had a less good quality of life. The results indicate that the majority of diabetes mellitus patients in Pondok Village fall into the good quality of life category. This study is supported by research by Florentina (5), which stated that respondents had a good quality of life because the majority of respondents had accepted the condition of their illness and were therefore able to control the disease when their blood sugar levels increased or decreased. This research is in line with the study by Raharja et al (19) which stated that a

portion of respondents had a good quality of life category with 59 respondents (70.2%) and a poor category with 21 respondents (25%). This proves that many respondents have an adequate quality of life. The researcher's assumption is reinforced by the study of Zaura (26) which stated that if self-care is done properly, it will improve the quality of life of patients with diabetes mellitus.

Based on the results of statistical tests on the Relationship between the Five Pillars of DM Management and the Quality of Life of Diabetes Mellitus Patients in Pondok Village, it was shown that out of 72 respondents, it was found that respondents who had good management of the five pillars with good quality of life were 42 people (58.3%), respondents who had poor management of the five pillars and poor quality of life were 22 people (30.6%). Respondents who had good management of the five pillars but poor quality of life were 5 people (6.9%) and respondents who had poor management of the five pillars but good quality of life were 3 people (4.2%). The test results obtained a p-value = 0.000 and an r value = 0.761, which means there is a strong relationship between the five pillars of management and the quality of life of diabetes mellitus patients in Pondok Village in 2025.

This research is supported by the study of Pebriani et al (17) which shows that the better the self-care management carried out by patients with diabetes mellitus, the higher the quality of life they experience; there is a fairly strong and positive relationship between these two variables. The same is also stated by Zaura (26), concluding that there is a relationship between self-care and quality of life in patients with type II diabetes mellitus in Biruen Regency (p-value 0.000), where patients must be able to manage if there is an increase in blood sugar levels. The five pillars of diabetes management are measures that must be carried out by patients with diabetes mellitus to achieve normal blood sugar levels. These five pillars include education, medical nutrition therapy, physical activity, medication adherence, and independent blood sugar control. Education is important to improve the knowledge, understanding, and skills of diabetes patients in managing their disease. Medical nutrition therapy helps to control ideal body weight and blood sugar levels. Physical activity can help increase insulin sensitivity, thereby lowering blood glucose levels. Drug therapy can control the body's blood glucose levels and prevent complications. Self-monitoring of blood sugar is important to evaluate the effectiveness of treatment (4).

Quality of life is the way individuals assess their existence in life, which is influenced by cultural background, the value system they adhere to, and their connection to personal goals, hopes, and standards. This concept encompasses various complex aspects, including physical health, psychological condition, level of freedom, social relationships, and the environment (21). Quality of life is one of the important factors that can affect a person's health status. Low quality of life can worsen the condition of a disease, and conversely, the condition of the disease also has a negative impact on quality of life, especially in patients with chronic illnesses, particularly diabetes mellitus (3). This study is in line with the research by Rahmawati et al. (20) entitled "The Relationship Between Compliance Level with the 4 Pillars of Diabetes Management and the Quality of Life of DM Patients at Danau Indah Health Center in 2023" with 52 respondents, where the p-value (0.000) < (0.005), meaning H_0 is accepted; there is a relationship between the level of adherence to the four pillars of diabetes and the quality of life of diabetes mellitus patients. The majority of respondents fall into the compliant category because most respondents comply with medication as well as carrying out physical activities.

This research is in line with Zaura's (26) study titled 'The Relationship Between Self-Care and Quality of Life of Patients with Type II Diabetes Mellitus.' This study was conducted in the working area of Jempa Community Health Center with a sample size of 242 people, resulting in 126 respondents who had good self-care, of which 123 respondents (50.8%) had a good quality of life. Meanwhile, among the 116 respondents with poor self-care, 105 respondents (43.4%) had a poor quality of life. The statistical test results showed that there is a relationship between self-care and quality of life in patients with type II diabetes mellitus in Biruen Regency (p-value 0.000). According to research by Pebriani et al (17), it was found that the majority of respondents had fairly good self-care management (66.7%) and a good quality of life (78.6%). A total of 28 respondents had self-care management in the fairly good category, with 19 respondents showing a good quality of life and 9 respondents showing a lower quality of life. The 14 respondents with good self-care management all had a good quality of life as well. Spearman Rank (Rho) analysis results showed that there is an effect of diabetes self-care management on the quality of life of type 2 diabetes patients (p value = 0.016). The correlation coefficient $r = 0.363^*$ indicates a fairly strong and positive relationship, meaning that the better the self-care management by type 2 diabetes patients, the better their quality of life.

CONCLUSION

The characteristics of 72 respondents showed that the majority were aged 60-69 years, totaling 35 people (48.6%). In terms of gender, there were 12 males (16.7%) and 60 females (83.3%). Based on the last level of education, the majority graduated from elementary school, totaling 49 people (68.15%). Based on occupation, the majority were not working, totaling 46 people (63.9%), followed by laborers 10 people (13.9%), and traders 14 people (19.4%). In terms of living arrangements, the most common was living with children, totaling 32 people (50%). The majority of respondents had diabetes for less than 5 years, totaling 45 people (62.5%). The most common complication was hypertension, affecting 23 people (31.9%). Most respondents routinely took antidiabetic medication, totaling 63 people (87.5%).

The five pillars of diabetes mellitus management in diabetic patients in Pondok Village are mostly well-managed, with 47 people (65.3%) having good management and 25 people (34.7%) having poor management. Most diabetic patients focus only on physical activity and diet, but do not take anti-diabetes medication, or vice versa. Diabetic patients have not fully implemented the five pillars of diabetes mellitus management. The quality of life of diabetic patients in Pondok Village is mostly good, with 45 people (62.5%) having a good quality of life and 27 people (37.5%) having a poor quality of life. Each aspect of the five pillars has a significant relationship with the quality of life of diabetes mellitus patients in Pondok Village with a p-value < 0.05 . The aspect of self-blood sugar control has the strongest correlation among the five pillars of diabetes mellitus management. It is suggested for the related health workers to continue providing education on managing the five pillars to improve patients' knowledge in dealing with the disease, especially in diabetes mellitus patients. Future researchers can continue this study by examining other factors that may affect the quality of life of diabetes mellitus patients.

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REFERENCES

1. Aliandu, E., Deviantos, A., Studi, P., Keperawatan, I., Guna, S., Yogyakarta, B., & Yogyakarta, S. N. (2023). Hubungan Perilaku Perawatan Mandiri Dengan Komplikasi DM Tipe 2. 15(1), 124–136.
2. Amalia Ayu Ramadhani, & Roissiana Khotami. (2023). Hubungan Tingkat Pendidikan, Pengetahuan, Usia dan Riwayat Keluarga DM dengan Perilaku Pencegahan Diabetes Mellitus Tipe 2 pada Usia Dewasa Muda. SEHATMAS: Jurnal Ilmiah Kesehatan Masyarakat, 2(1), 137–147.
3. Balyan, Sri Andala, & Yudi Akbar. (2023). Hubungan Aktivitas Fisik dan Kualitas Hidup Pasien Diabetes Melitus. Jurnal Assyifa Ilmu Keperawatan Islami, 8(2), 1–9.
4. Duri, V. R. S., Dian Ellina, A., & Nurwijayanti, N. (2024). Efektifitas Kepatuhan Pelaksanaan Empat Pilar Diabetes Melitus Terhadap Kadar Gula Darah dan Kadar HbA1C Penderita Diabetes Melitus Tipe 2 (Studi di Klinik Zahra Medika Silo Jember). Klabat Journal of Nursing, 6(1), 14.
5. Florentina, L. (2022). Hubungan Self Care dengan Kualitas Hidup Pasien Diabetes Melitus Tipe 2. Stikes Santa Elisabeth Medan.
6. Fortuna, T. A., Karuniawati, H., Purnamasari, D., & Purlinda, D. E. (2023). Faktor-Faktor yang Mempengaruhi Komplikasi pada Pasien Diabetes Mellitus di RSUD Dr. Moewardi Factor Affecting Complications in Diabetes Mellitus Patients in RSUD Dr. Moewardi. Jurnal Farmasi Indonesia, 20(1),
7. Hartono, & Ediyono, S. (2024). Hubungan Tingkat Pendidikan, Lama Menderita Sakit Dengan Tingkat Pengetahuan 5 Pilar Penatalaksanaan Diabetes Mellitus Di Wilayah Kerja Puskesmas Sungai Durian Kabupaten KBU Raya Kalimantan Barat. Journal of TSCS1Kep, 9(1), 2018–2022.
8. Hentu, A. S., Irawati, D., Anggareni, D., Jumaiyah, W., & Abriyanti, R. M. (2023). Penerapan Evidence Based Nursing Practice (EBNP) Edukasi Video 5 Pilar terhadap Kadar Glukosa Darah Pasien Diabetes. Journal of Telenursing (JOTING), 5(2), 3223–3230.
9. Indah, Nirma, Haskas, Yusran, & Restika, I. (2023). Hubungan Self Care Dengan Quality of Life Serta Screening Risiko Ulkus Diabetik Pada Penderita Diabetes Melitus Tipe 2. JIMPK: Jurnal Ilmiah Mahasiswa & Penelitian Keperawatan, 3(2), 65–72.
10. Islamsiasih, I. (2022). Gambaran Self Management Pada Penderita Diabetes Mellitus di Wilayah Kerja Puskesmas Karanganyar Purbalingga. Universitas Muhammadiyah Surakarta, 2507(February), 1–9.
11. Komariah, K., & Rahayu, S. (2020). Hubungan Usia, Jenis Kelamin Dan Indeks Massa Tubuh Dengan Kadar Gula Darah Puasa Pada Pasien Diabetes Melitus Tipe 2 Di Klinik Pratama Rawat Jalan Proklamasi, Depok, Jawa Barat. Jurnal Kesehatan Kusuma Husada, Dm, 41–50.

12. Kriswiastiny, R., Aurelia Hidayat, N., Ladyani Mustofa, F., & Hermawan, D. (2021). Hubungan Lama Menderita Diabetes Melitus dan Kadar Gula Darah dengan Kadar Kolesterol Total Pada Pasien Diabetes Melitus Tipe 2 di Rumah Sakit Pertamina Bintang Amin Husada Bandar Lampung Tahun. *Medula*, 12, 486–494.
13. Marbun, S., Sipayung, A., Silitonga, N., Erwin, Studi Keperawatan, P., Farmasi Dan Ilmu Kesehatan Universitas Sari Mutiara Indonesia, F., & Author, C. (2022). The Relationship Between the Five Pillar Implementation and Quality of Life in Type II Diabetes Mellitus Patients. *Tour Health Journal*, 1(3), 22–32.
14. Muna Lubis, S. A., Aminah, T. N. F., Pangestuty, S., Atika, R., Sembiring, S. P., & Aidha, Z. (2023). Faktor-Faktor yang Berhubungan dengan Kejadian Diabetes Melitus (DM) di Desa Kubah Sentang Kecamatan Pantai Labu. *Jurnal Ilmiah Universitas Batanghari Jambi*, 23(2), 2061.
15. Nisa, H., & Kurniawati, P. (2022). Kualitas Hidup Penderita Diabetes Melitus Dan Faktor Determinannya. *Medical Technology and Public Health Journal*, 6(1), 72–83.
16. Nurhayati, I., Sukmaningtyas, R. D., Zakiya, N., Handayani, F., & Dewi, V. (2023). Pengabdian Masyarakat Pendidikan Kesehatan Tentang Penyakit Diabetes Melitus dalam Upaya Pencegahan Diabetes Melitus pada Masyarakat di Dukuh Gunung Pucangan, Kartasura, Sukoharjo. *Prosiding Seminar Nasional Pengabdian Kepada Masyarakat: Peduli Masyarakat*, 3(2), 107–112.
17. Pebriani, S. H., Marleni, L., Anggraini, H., & Yunola, S. (2024). Implementasi Self Care Management Diabetes Terhadap Kualitas Hidup Pasien DM Tipe 2. *JIMPK: Jurnal Ilmiah Mahasiswa & Penelitian Keperawatan*, XIV (2), 118–131.
18. Prawinda, Y. D., Minahussannyah, Setiya Ningrum, D. E., Listiana, Mujirahayu, V., Noviana, D. W., Zuliyanti, E., Devica Permatajaya, K. K., & Pranata, S. (2024). Penatalaksanaan Lima Pilar Diabetes Melitus Oleh Diabetisi: Studi Fenomenologi. *Journal Nursing Research Publication Media (NURSEPEDIA)*, 3(1), 12–25.
19. Raharja, F. T., Putra, O. N., Yusan, L. Y., Pratama, R., Farmasi, P. S., Farmasi, F., Tuah, U. H., Farmasi, F., Tuah, U. H., Ilmu, B., Masyarakat, K., Kedokteran, F., Tuah, U. H., & Hidup, K. (2024). Pengukuran Kualitas Hidup dan Faktor yang Memengaruhinya Pada Pasien Diabetes Melitus Tipe 2 di Beberapa Puskesmas Kota Surabaya. 20(4), 613–623.
20. Rahmawati, A. A., Simamora, R. S., & Pelawi, A. M. P. (2024). Hubungan Tingkat Kepatuhan 4 Pilar Penatalaksana Diabetes dengan Kualitas Hidup Penderita DM di Puskesmas Danau Indah Tahun 2023. *Jurnal Bidang Ilmu Kesehatan*, 14(1), 49–59.
21. Sani, F. N., Widiastuti, A., Ulkhasanah, M. E., & Amin, N. A. (2023). Gambaran Kualitas Hidup pada Pasien Diabetes Melitus. *Jurnal Penelitian Perawat Profesional*, 5(3), 1151–1158.
22. Suparyanto dan Rosad (2015). (2020). Modul Metodologi Penelitian Kuantitatif (KSM361). *Suparyanto*, 5(3), 248–253.
23. Susanti, Fajriyah, N., Kristiani, R. B., Yobel, S., & Bistara, D. N. (2024). Edukasi Pendampingan Relaksasi Otot Progresif dan 5 Pilar Terhadap Perubahan Pengetahuan dan Kestabilan Kadar Gula Darah Penderita Diabetes Melitus Tipe 2. *Community Development in Health Journal*, 2.
24. Syatriani, S., & Amaliah, A. R. (2023). Faktor Yang Berhubungan Dengan Kepatuhan Minum Obat Penderita Diabetes Melitus Tipe II di Puskesmas Tamamaung Factors Associated with Compliance with Taking Medication for Patients with Diabetes Mellitus Type II at the Tamamaung Health Center. *Jurnal Promotif Preventif*, 6(3), 394–402.

25. Utami, D. C., Nurhidayati, I., Pramono, C., & Winarti, A. (2019). Hubungan Aktivitas Fisik dengan Kualitas Hidup Lansia Usia 60-69 Tahun di Desa Sudimoro Kecamatan Tulung Kabupaten Klaten. *The 1 Conference of Health and Social Humaniora*, 1, 97–107.
26. Zaura, T. (2022). Hubungan Self Care Dengan Kualitas Hidup Pasien Diabetes Melitus. *Jurnal Endurance*, 2(2), 132–144.