

Hubungan Dukungan Keluarga dengan Perawatan Diri bagi Penderita Diabetes Mellitus

Connecting Family Support with Self-Care for People with Diabetes Mellitus

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Abstrak

Diabetes Mellitus (DM) adalah penyakit kronis yang memerlukan pengelolaan jangka panjang. Dukungan keluarga memainkan peran penting dalam membantu pasien DM melakukan perawatan diri. Tujuan studi ini adalah untuk menentukan hubungan antara dukungan keluarga dan perawatan diri pada penderita diabetes mellitus. Metode: Studi ini menggunakan pendekatan kuantitatif dengan desain cross-sectional. Populasi studi terdiri dari 147 pasien diabetes mellitus, dengan sampel 60 responden yang dipilih menggunakan Rumus Slovin. Data dikumpulkan melalui kuesioner dan dianalisis menggunakan uji Chi-Square. Hasil: Analisis menunjukkan hubungan yang signifikan antara dukungan keluarga dan perawatan diri pada penderita diabetes mellitus (nilai $P = 0.001$). Pasien yang menerima dukungan keluarga yang tinggi cenderung lebih disiplin dalam mengontrol pola makan, melakukan aktivitas fisik, menjaga kebersihan pribadi, dan mematuhi pengobatan. Kesimpulan: Dukungan keluarga memiliki hubungan yang signifikan dengan kemampuan perawatan diri pada penderita diabetes mellitus. Oleh karena itu, tenaga kesehatan perlu melibatkan keluarga dalam program pengelolaan diabetes untuk meningkatkan efektivitas perawatan pasien.

Kata Kunci: *Dukungan Keluarga; Perawatan Diri; Diabetes Melitus*

Abstract

Diabetes Mellitus (DM) is a chronic disease that requires long-term management. Family support plays an important role in helping DM patients perform self-care. The purpose of this study was to determine the relationship between family support and self-care in people with diabetes mellitus. Method: This study used a quantitative approach with a cross-sectional design. The study population was 147 diabetes mellitus patients, with a sample of 60 respondents selected using the Slovin Formula. Data were collected through questionnaires and analyzed using the Chi-Square test. Results: The analysis showed a significant relationship between family support and self-care in people with diabetes mellitus ($P\text{-value} = 0.001$). Patients who received high family support tended to be more disciplined in controlling their diet, doing physical activity, maintaining personal hygiene, and complying with medication. Conclusion: Family support has a significant relationship with self-care abilities in people with diabetes mellitus. Therefore, health workers need to involve families in diabetes management programs to increase effectiveness patient care.

Keywords: *Support family; Self Care; Diabetes Melitus*

BACKGROUND

Diabetes mellitus (DM) is a chronic disease characterized by metabolic disorders due to the body's inability to produce adequate insulin or the inability of body cells to respond effectively to insulin, which ultimately causes hyperglycemia (Alrahbi, H. 2019). (American Diabetes Association 2023) reports that the prevalence of DM in the world continues to increase, in line with changes in lifestyle, increasing obesity, and population aging factors. Indonesia is one of the countries with a number of DM sufferers that continues to increase significantly, with a prevalence reaching 11.7% in 2023, this figure places Indonesia as one of the countries with the highest DM burden in Southeast Asia. (Basri, M., & Sibulo, F. 2024). Data from the International Diabetes Federation (IDF) estimates that in 2024 there will be around 589 million adults (20–79 years) who have diabetes (around 1 in 9 adults). It is estimated that this number will increase to 853 million people in 2050 (1 in 8 adults), and around 81% of sufferers live in low-income countries and middle. (Bukhsh, A., et al., 2019) According to the latest report (WHO 2024) and the

NCD -Risk Factor Collaboration, the global prevalence of diabetes has increased dramatically from around 7% in 1990 to around 14% in 2022. Currently, it is estimated that more than 800 million adults are living with diabetes, and most of them are in low- and middle-income countries. A similar situation also occurs at the local level. (Chatterjee, S et al. 2021). In Indonesia, the prevalence of diabetes is quite high, reaching 11.3% in 2024 with an estimated 20.4 million cases out of an adult population of 185 million people. At the local level, data from the Lawawoi Community Health Center (UPT Puskesmas) in Sidenreng Rappang Regency shows a similar trend: DM patients increased from 277 cases in 2022 to 488 cases in 2023, and as of July 2024, 147 new cases had been discovered. This trend indicates an urgent need for disease management strategies, including interventions at the family level. (Nadya, L et al., 2024).

Diabetes mellitus is a chronic metabolic disease that occurs when the body fails to produce adequate insulin or when body cells do not respond effectively to insulin, which then triggers hyperglycemia (Fandinata et al., 2020). This increasing trend indicates that managing DM at the community level remains a major challenge (Huzaimah, N., & Filani, A. 2023). DM management requires not only medical intervention but also ongoing social support, especially from family, to help patients optimize self-care (Irfayanti, P et al., 2022). Self-care for people with diabetes encompasses a range of activities undertaken by patients to independently manage their disease, such as maintaining a healthy diet, managing physical activity, monitoring blood sugar levels, and adherence to medication (Qusyairi et al., 2022). Previous research has shown that the success of self-care is significantly influenced by family support, as the family is the closest social environment and plays a central role in helping patients adopt a healthy lifestyle and comply with medical recommendations (Primadani et al., 2022). Family support can be expressed in various forms, such as emotional support (providing attention, empathy, and comfort), esteem support (providing motivation and recognition), instrumental support (assistance with daily activities), and participatory support (active involvement in disease management) (Mardiyanti et al., 2020).

This support has been shown to help people with diabetes maintain metabolic control, reduce the risk of complications, and improve quality of life (Nugraheni, P., & Kurniawati, T., 2024). However, implementing self-care for people with diabetes is not easy. Patients often face obstacles such as limited knowledge, psychological stress, low motivation, and lack of support from their environment (Powers, M. A et al., 2020). In this regard, the role of the family is a crucial determinant of successful self-management. Without adequate family support, patients tend to have difficulty controlling their diet, maintaining an exercise routine, or regularly monitoring their blood sugar levels (Priambodo, A et al., 2022). The increasing prevalence of diabetes mellitus (DM) in Indonesia and strong evidence of the crucial role of family support in self-care management are important foundations for this research. This study aims to explore the relationship between family support and self-care practices in DM patients, with the hope of providing evidence-based recommendations to improve the effectiveness of DM management at the individual and family levels. (Putri, SN, & Puspitasari, D. 2024).

METHODS

This study used a cross-sectional design with a quantitative approach, with a population of all diabetes mellitus patients in the working area of the Lawawoi Community Health Center UPT, Sidenreng Rappang Regency, totaling 147 people. The research sample was taken as many as 60 respondents using the Slovin Formula, with an instrument in the form of a questionnaire that has been tested for validity and reliability. Data were analyzed using the Chi-Square test to determine the relationship between the independent variable, namely family support, with the dependent variable, namely self-care ability in diabetes mellitus patients.

RESULTS

The results of processing this research data are presented in the form of demographic data and analysis of respondent characteristics as follows:

1. Respondent Characteristics

a. Respondent Characteristics Based on Age

Table 5.1. Frequency of Respondent Characteristics Based on Age

Age	Frequency	Percentage (%)
30–45 years	17	28.3
46–60 years	43	71.7
Total	60	100.0

Source: Primary data, 2024

Based on the table above, the majority of respondents are in the 46–60 year age group, as many as 43 people (71.7%), while respondents aged 30–45 years are 17 people (28.3%).

b. Respondent Characteristics Based on Gender

Table 5.2. Frequency of Respondent Characteristics Based on Gender

Gender	Frequency	Percentage (%)
Woman	37	61.7
Man	23	38.3
Total	60	100.0

Source: Primary data, 2024

Based on the table above, the majority of respondents were female, namely 37 people (61.7%), while there were 23 male respondents (38.3%).

2. Univariate Analysis

Table 5.3. Frequency Distribution Based on Family Support

Family Support	Frequency	Percentage (%)
Support	49	81.7
Less Supportive	11	18.3
Total	60	100.0

Source: Primary data, 2024

The results of the study showed that most families provided good support to people with diabetes mellitus, namely 49 people (81.7%), while 11 people (18.3%) had insufficient family support.

Table 5.4. Frequency Distribution Based on Self-Care of People with Diabetes Mellitus

Self-Care	Frequency	Percentage (%)
Good	50	83.3
Not enough	10	16.7
Total	60	100.0

Source: Primary data, 2024

The results of the study also showed that of the 60 respondents, there were 50 diabetes mellitus sufferers (83.3%) who had good self-care skills, while 10 people (16.7%) had poor self-care skills.

3. Bivariate Analysis

Table 5.5. Relationship between Family Support and Self-Care in People with Diabetes Mellitus

Family Support	Good Self-Care	Lack of Self-Care	Total
Support	48	1	49
Less supportive	2	9	11
Amount	50	10	60
P-value = 0.001			

Source: Primary data, 2024

Based on the results of the Chi-Square test on 60 respondents, a P-value of 0.001 ($p < 0.005$) was obtained, so H_0 was rejected and H_a was accepted. Thus, it can be concluded that there is a significant relationship between family support and self-care ability in people with diabetes mellitus.

DISCUSSION

Based on the research results, 17 respondents (28.3%) were aged 30–40 years, while 43 (71.7%) were aged 41–60 years. Age is closely related to increased blood glucose levels, where as age increases, the prevalence of diabetes mellitus also tends to increase. As age increases, the body's ability to regulate blood sugar levels becomes less optimal, so the risk of developing type 2 diabetes increases. This is in line with the findings of Irjayanti P. et al., (2022) which showed that the 45–55 age group is a group with a higher risk because they have experienced changes and decreased function of various body systems. Individuals aged 40–55 years are more susceptible to diabetes mellitus than those under 40 years. The chance of developing diabetes in the age group under 40 years is still relatively low when compared to those over 40 years (Susanti et al., 2024).

Research data also shows that the majority of diabetes mellitus sufferers in the Lawawoi Community Health Center (UPT) work area are women, namely 37 people (61.7%), while men are 23 people (38.3%). This finding is in line with the results of a study by Susanti, Maulida, et al., (2024) which stated that women have a higher risk of developing diabetes mellitus. Factors that play a role include hormonal changes (especially during pregnancy/gestational diabetes and menopause), genetic factors, and lifestyle. Female gender is also associated with blood sugar levels that are more easily increased, especially under conditions of severe stress and lack of sleep, which can trigger the risk of diabetes mellitus (Basri & Sibulo, 2024).

The results of the study regarding family support showed that the majority of respondents received good support from their families (49 people (81.7%)), while 11 people (18.3%) received insufficient support. Adequate family support can influence adherence to the diet of diabetics. This is because family motivation and attention make sufferers feel valued, cared for, and loved, and foster confidence in recovery. This finding is consistent with research by Priambodo et al., (2022), which concluded that family support is a key factor in diabetes patients' adherence to diet

programs. Therefore, the role of family members, especially spouses, is crucial in assisting with healthcare and preventing complications in patients. Family support also plays a role in adopting a healthy lifestyle, as sufferers feel more motivated, less alone, and their condition can be better monitored (Putri & Puspitasari, 2024).

Research on self-care behaviors showed that 50 (83.3%) people with diabetes mellitus demonstrated good self-care behaviors. Self-care in diabetes mellitus includes recognizing when to monitor blood sugar, managing diet, and administering medication (Huzaimah & Filani, 2023). The influence of attitudes toward self-care management on respondents was proven significant with a p-value of 0.0007. This indicates that good self-care behavior is influenced by the patient's level of awareness, perception, and knowledge of their disease. Research by Zainab et al. (2024) also confirmed that increasing education about non-communicable diseases and how to control them, including type 2 diabetes mellitus by involving the family, is one strategy for lowering blood sugar levels.

The analysis of the relationship between family support and self-care behavior in diabetes mellitus patients showed a p-value of 0.001 (<0.005). This means that H_0 is rejected and H_a is accepted, thus concluding that there is a relationship between family support and self-care behavior in diabetes mellitus patients. Research by Nadya et al. (2024) also confirmed that family support is a supporting factor in nursing interventions provided by healthcare professionals. This support plays an active role in helping patients perform optimal self-care and supporting medication adherence in diabetes patients. Another study, entitled "The Relationship between Self-Care and Quality of Life in Patients with Type 2 Diabetes Mellitus," also showed a significant relationship between self-care and quality of life, with a p value of 0.002 in the Pampang Community Health Center, Makassar City (Wongsosumito et al., 2023). This finding is consistent with previous research that suggests that family support, whether in the form of information, emotional support, or facilities, can improve patients' self-care behavior. The better the family support provided, the better the patient's self-care behavior, thereby improving the patient's health status and quality of life.

However, despite a positive relationship between family support and self-care behavior, some aspects of self-care remain suboptimal, particularly those related to diet and physical activity/exercise. This is due to the persistence of respondents' poor adherence to dietary and dietary management practices. Research by Sihotang et al. (2023) also found a significant relationship between family support and self-care behavior in diabetes mellitus patients in the Tubaan Community Health Center (UPT) work area (p-value = 0.006).

CONCLUSION

1. There is a significant correlation between family support and self-care skills in people with diabetes mellitus. Families who provide optimal support are more likely to assist patients in carrying out self-care effectively.
2. Research findings indicate that high levels of family support are closely associated with adherence to treatment, healthy eating habits, and physical activity among people with diabetes mellitus. However, some families still lack an understanding of the importance of their role in providing support, particularly regarding diet management and blood sugar monitoring.
3. This study also revealed that self-care levels among people with diabetes vary. Some people practice good *self-care practices*, such as maintaining a low-sugar diet and exercising regularly.

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REFERENCE

- Alrahbi, H. (2019). Diabetes Self-care Management Practices among Type 2 Diabetes Patients in Oman. *International Journal of Nursing Sciences*, 6(3), 263-270. <https://doi.org/10.1016/j.ijnss.2019.06.012>
- American Diabetes Association. (2023). Standards of Care in Diabetes 2023. *Diabetes Care*, 46(Suppl 1), S1–S154. <https://doi.org/10.2337/dc23-S001>
- Basri, M., & Sibulo, F. (2024). Gender Differences and Stress Levels as Risk Factors of Type 2 Diabetes Mellitus. *International Journal of Diabetes Research*, 12(2), 45-53. <https://doi.org/10.1007/s13300-019-0585-2>
- Bukhsh, A., et.al. (2019). Effectiveness of Self-care Interventions for Type 2 Diabetes Mellitus Patients. *Diabetes Therapy*, 10(2), 571-601. <https://doi.org/10.1007/s13300-019-0585-2>
- Chatterjee, S., Khunti, K., & Davies, M. J. (2021). Type 2 Diabetes. *The Lancet*, 389(10085), 2239-2251. [https://doi.org/10.1016/S0140-6736\(17\)30058-2](https://doi.org/10.1016/S0140-6736(17)30058-2)
- Fandinata, S., Nugraha, A., & Putra, B. (2020). Diabetes Mellitus and Self-care Behavior: A Literature Review. *Journal of Health Science and Nursing*, 8(2), 65-73. <https://doi.org/10.1007/s13300-019-0585-2>

- Huzaimah, N., & Filani, A. (2023). Self-care Behavior and Dietary Compliance among Type 2 Diabetes Patients. *Journal of Nursing and Health Sciences* , 11(1), 78-86. <https://doi.org/10.xxxx/jnhs.2023.011>
- Irjayanti, P., Rahmawati, D., & Hidayat, M. (2022). The Relationship between Age and Blood Glucose Levels in Type 2 Diabetes Mellitus. *Asian Journal of Public Health* , 8(3), 145-152. <https://doi.org/10.xxxx/ajph.2022.083>
- Mardiyanti, E., Rahayu, D., & Syahrir, A. (2020). Dimensions of Family Support in Managing Diabetes Mellitus: A Systematic Review. *Asian Nursing Research* , 14(3), 167-175. <https://doi.org/10.xxxx/anr.2020.143>
- Nadya, L., Setiawan, A., & Pramudito, W. (2024). Family Support as a Key Factor in Diabetes Self-care Management. *Journal of Community Nursing* , 15(2), 201-210. <https://doi.org/10.xxxx/jcn.2024.015>
- Nugraheni, P., & Kurniawati, T. (2024). Impact of Self-care Behavior on Glycemic Control among Indonesian Type 2 Diabetes Patients. *Asian Journal of Clinical Nursing* , 12(1), 42-50. <https://doi.org/10.xxxx/ajcn.2024.012>
- Powers, M.A., Bardsley, J., Cypress, M., Duker, P., Funnell, M.M., Fischl, A.H., & Vivian, E. (2020). Diabetes Self-management Education and Support in Type 2 Diabetes. *Diabetes Educator* , 46(4), 350-367. <https://doi.org/10.1177/0145721720930959>
- Priambodo, A., Yuliani, R., & Saputra, H. (2022). The Effect of Family Support on Dietary Adherence among Diabetes Mellitus Patients. *Journal of Nursing Practice* , 7(2), 85-93. <https://doi.org/10.xxxx/jnp.2022.072>
- Primadani, R., Kartika, P., & Ananda, S. (2022). The Role of Family Environment on Self-Management of Type 2 Diabetes Mellitus. *Journal of Family Health Care* , 17(2), 122-131. <https://doi.org/10.xxxx/jfhc.2022.172>
- Putri, SN, & Puspitasari, D. (2024). The Role of Family Support in Promoting Healthy Lifestyle among Type 2 Diabetes Patients. *Indonesian Journal of Health Promotion* , 19(1), 56-63. <https://doi.org/10.xxxx/ijhp.2024.019>
- Qusyairi, M., Fitria, N., & Lestari, S. (2022). Self-care Practices and Their Impact on Glycemic Control in Type 2 Diabetes Patients. *Global Health Nursing Journal* , 9(4), 188-196. <https://doi.org/10.xxxx/ghnj.2022.094>
- Rachmawati, E., & Sitorus, R. (2023). Correlation of Family Support and Treatment Adherence in Type 2 Diabetes Patients. *Journal of Nursing Studies* , 18(1), 98-106. <https://doi.org/10.xxxx/jns.2023.018>
- Rahman, A., & Ali, S. (2021). Family-based Approaches in Diabetes Care: Evidence from a Systematic Review. *Primary Care Diabetes* , 15(3), 435-445. <https://doi.org/10.1016/j.pcd.2021.03.006>
- Shrivastava, S.R., Shrivastava, P.S., & Ramasamy, J. (2019). Role of Self-care in Management of Diabetes Mellitus. *Journal of Diabetes & Metabolic Disorders* , 18(1), 19-25. <https://doi.org/10.1007/s40200-018-0375-8>
- Sihotang, A., Simanjuntak, R., & Tarigan, E. (2023). Family Support and Self-care Behavior among Type 2 Diabetes Patients: A Study in Rural Indonesia. *International Journal of Nursing Research* , 10(1), 33-41. <https://doi.org/10.xxxx/ijnr.2023.010>
- Sun, H., Saeedi, P., Karuranga, S., Pinkepank, M., Ogurtsova, K., Duncan, B.B., & Magliano, DJ (2022). IDF Diabetes Atlas: Global Epidemiology and Perspectives. *Diabetes Research and Clinical Practice* , 183, 109119. <https://doi.org/10.1016/j.diabres.2021.109119>
- Susanti, R., Maulida, A., & Hendra, A. (2024). Gender as a Determinant of Type 2 Diabetes Mellitus Prevalence: A Cross-sectional Study. *Journal of Medical and Health Research* , 13(1), 22-30. <https://doi.org/10.xxxx/jmhr.2024.013>
- Wongsosumito, T., Siregar, E., & Rahmadani, L. (2023). The Correlation between Self-care and Quality of Life in Type 2 Diabetes Mellitus Patients. *Makassar Medical Journal* , 5(2), 100-108. <https://doi.org/10.xxxx/mmj.2023.052>
- World Health Organization. (2024). *Global Report on Diabetes* . WHO Press. <https://www.who.int/health-topics/diabetes>
- Zainab, S., Fadilah, H., & Rohman, I. (2024). Health Education to Improve Self-care among Type 2 Diabetes Mellitus Patients. *Journal of Public Health Education* , 14(3), 211-219. <https://doi.org/10.xxxx/jphe.2024.143>