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Family Involvement In Enhancing Self-Care Management Among Type 2 Diabetes Patients In A Rural Community

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ABSTRACT

Type 2 Diabetes Mellitus (T2DM) is an increasing public health concern in Indonesia, particularly in rural areas with limited access to healthcare services. Successful diabetes management relies on consistent self-care behaviors, including medication adherence, dietary regulation, physical activity, and glucose monitoring. Family involvement plays an essential role in supporting these behaviors, yet evidence from rural Indonesian contexts remains limited. This study aimed to describe how family involvement contributes to improving self-care management among patients with T2DM in a rural community. A qualitative case study was conducted with five families in Cigunung Village through semi-structured interviews, direct observations, and document reviews. Thematic analysis identified five major themes: family perceptions and responsibilities, emotional–instrumental–spiritual support, family strategies in assisting self-care, challenges encountered, and behavioral changes in patients. Family involvement enhanced medication adherence, dietary management, motivation, and emotional well-being despite socioeconomic barriers. These findings highlight the pivotal role of family support in effective diabetes management. Community nurses are encouraged to adopt family-centered and culturally sensitive approaches in health education and home-based empowerment programs to strengthen sustainable self-care practices.

Keywords: family involvement; self-care; type 2 diabetes mellitus; qualitative study; rural

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BACKGROUND

Type 2 Diabetes Mellitus (T2DM) is a chronic metabolic disorder with a rapidly increasing global prevalence and requires long-term management to prevent serious complications. According to the International Diabetes Federation (IDF, 2021) Approximately 537 million adults worldwide were living with diabetes in 2021, and this number is projected to reach 643 million by 2030. In Indonesia, the number of individuals with diabetes is estimated to increase from 10.7 million in 2019 to 13.7 million in 2030 (Muzharaffah & Simamora, 2023). National data from the Basic Health Research (Balitbangkes, 2018) also reported a rise in diabetes prevalence from 6.9% to 8.5%. In West Java Province, approximately 570,611 people were diagnosed with diabetes, while in Tasikmalaya City, 11,782 cases were reported in 2023 (Bayan, 2024). These data indicate that T2DM is not only a national concern but also a significant regional and local public health burden that requires comprehensive and effective management strategies.

Effective diabetes management relies heavily on consistent self-care behaviors such as diet control, medication adherence, physical activity, blood glucose monitoring, and foot care. However, many patients struggle to maintain self-care due to limited knowledge, low motivation, psychological

distress, and physical limitations (Febri et al., 2024). The World Health Organization defines self-care as the ability of individuals, families, and communities to promote health, prevent disease, and manage illness with or without the support of healthcare professionals. In the context of T2DM, inadequate self-care can lead to acute complications such as hypoglycemia and hyperglycemia, as well as chronic complications including nephropathy, neuropathy, retinopathy, cardiovascular disease, and diabetic foot ulcers (American Diabetes Association, 2022). These complications significantly reduce quality of life and increase morbidity and mortality.

Family plays a crucial role as the closest support system in the daily lives of patients. Family members can assist by reminding patients to take medication, preparing healthy meals, encouraging physical activity, accompanying them to healthcare facilities, and providing emotional and spiritual support (Maryati et al., 2024). Previous studies have shown that strong family involvement increases treatment adherence, improves glycemic control, and enhances quality of life in patients with T2DM (Akbar & Zanzibar, 2023). Conversely, a lack of family support contributes to poor disease management, non-adherence, and increased risk of complications (Pangastuti et al., 2024). Therefore, family-centered care is considered an essential component in the long-term management of chronic illnesses such as diabetes.

However, most existing studies have focused on quantitative measurements of family support and have not explored deeper experiences, strategies, and challenges faced by families in assisting T2DM patients with daily self-care. Additionally, research in rural settings remains limited, even though rural communities often have strong family bonds but face barriers to accessing healthcare services (Dewi et al., 2022). Cigunung Village in Tasikmalaya is one such rural area where cultural values strongly emphasize family involvement, making it a relevant context to explore how families contribute to improving self-care management in T2DM patients.

Therefore, this study aims to explore the role of family involvement in enhancing self-care management among patients with Type 2 Diabetes Mellitus using a qualitative case study approach. Specifically, this study aims to understand family experiences, the forms of support provided, the strategies implemented, the challenges encountered, and the impact of family involvement on patients' self-care behaviors, in order to inform the development of effective family-based nursing interventions for chronic disease management.

RESEARCH METHODS

This study employed a qualitative approach with a case study design as the type of research. A qualitative approach was selected to gain an in-depth understanding of meanings, experiences, and interactional dynamics within everyday life, particularly in the context of long-term chronic disease management.

The research stimulus (phenomenon of interest) was family involvement in supporting self-care management among patients with Type 2 Diabetes Mellitus (T2DM) in a rural setting. This phenomenon included how family members supported patients' daily self-care activities, such as dietary management, medication adherence, health monitoring, and the provision of emotional and spiritual support.

A qualitative case study design was chosen to explore how and why family involvement influences the sustainability of self-care among patients with T2DM in a rural context, including the strategies families used and the challenges they faced in providing continuous support.

Tools and Materials

The tools and materials used in this study included:

- A semi-structured interview guide consisting of open-ended questions to explore family involvement in supporting self-care management among patients with Type 2 Diabetes Mellitus.
- An observation checklist used to document family assistance in patients' daily self-care activities. Observational data were recorded in narrative form as field notes to capture contextual details and interactions.
- A document review form used to examine relevant patient records, including blood glucose monitoring notes, treatment schedules, and educational materials provided by healthcare services.

- Data recording tools, including an audio recorder for interviews, field notebooks for observational notes, and transcription sheets for verbatim data transcription.

Research Procedure

This study was conducted in Cigunung Village, Parungponteng District, Tasikmalaya Regency, Indonesia, a rural area characterized by strong family ties and a relatively high prevalence of Type 2 Diabetes Mellitus (T2DM). Data collection was carried out from May to November 2025.

Participants were selected using purposive sampling based on predefined inclusion criteria. The study involved five families who were caring for family members with T2DM. The inclusion criteria were:

- (1) patients diagnosed with T2DM for at least six months;
- (2) patients aged ≥ 20 years;
- (3) patients living in the same household as family members; and
- (4) at least one family member actively involved in supporting daily self-care activities.

Families were excluded if patients required intensive care due to severe complications or if family members were unwilling to participate.

Data were collected using three complementary methods supported by defined research instruments. First, semi-structured interviews were conducted with patients and family caregivers to explore perceptions, forms of support, strategies, and challenges related to self-care management. All interviews were audio-recorded with participants' consent and transcribed verbatim.

Second, direct observations were carried out to capture real-life caregiving practices, including medication adherence, dietary management, physical activity, and emotional support. Observational data were recorded in narrative form as field notes, guided by an observation checklist.

Third, document reviews were conducted to examine blood glucose monitoring logs, medication records, and educational materials. Data from observations and document reviews were systematically documented in field notes to support and triangulate findings from interviews.

Data Analysis

Data were analyzed using thematic analysis. The procedure consisted of repeatedly reading transcripts, generating initial codes, grouping similar codes into categories, and identifying major themes. Triangulation across interviews, observations, and document reviews was conducted to ensure credibility, dependability, and confirmability of the findings.

Ethical Considerations

Ethical principles were upheld throughout the study. Participants were informed about the study objectives, procedures, potential benefits, and their voluntary participation rights, including the right to withdraw at any time. Written informed consent was obtained from all participants. Privacy and confidentiality were protected by assigning coded identifiers. Ethical approval was granted by the Research Ethics Committee of the Faculty of Health Sciences, Universitas Bakti Tunas Husada Tasikmalaya (Approval No. 229-01/E.01/KEPK-BTH/VII/2025). The study followed the ethical guidelines of the Declaration of Helsinki.

RESULTS AND DISCUSSION

RESULTS

A total of five families caring for patients with Type 2 Diabetes Mellitus (T2DM) participated in this study. The families consisted of spouses and adult children who were actively involved in supporting patients' daily self-care activities. The characteristics of the families and patients are presented in **Table 1**.

The analysis generated **five major themes** describing family involvement in supporting self-care management among patients with T2DM: (1) family perception and sense of responsibility; (2) forms of family support; (3) strategies to assist self-care management; (4) challenges faced by families, and (5) behavioral changes in patients. The interaction among these themes and their influence on patient self-care behaviors is illustrated in the conceptual model (Figure 1).

Table 1. Characteristics of Families and Patients with Type 2 Diabetes Mellitus

CODE	RELATIONSHIP TO PATIENT	AGE OF PATIENT	DURATION OF DIABETES	FAMILY MEMBERS INVOLVED	NOTES
F1	Spouse	58	8 years	Husband–wife	High involvement in daily care
F2	Adult Child	62	10 years	Daughter	Provides emotional and instrumental support
F3	Spouse + Children	55	6 years	Wife and two children	Faces financial barriers
F4	Adult Child	60	7 years	Son	Limited access to healthcare facilities
F5	Spouse	64	12 years	Wife	Strong spiritual support

Theme 1: Family Perception and Sense of Responsibility

Families perceived diabetes as a lifelong condition requiring continuous management. This perception fostered a strong sense of responsibility to support patients in maintaining health-related behaviors and adhering to medical recommendations. Family members felt obligated to monitor symptoms, remind patients about medication schedules, and actively participate in daily care activities.

Theme 2: Forms of Family Support

Families described three main forms of support: emotional, instrumental, and spiritual. Emotional support included listening, empathy, and encouragement, which participants reported as helping reduce patients’ anxiety and stress. Instrumental support involved preparing healthy meals, organizing medication schedules, and accompanying patients to healthcare facilities. Spiritual support was expressed through prayer and participation in religious activities, which families described as helping patients accept their condition and remain motivated in managing diabetes.

Theme 3: Strategies to Assist Self-Care Management

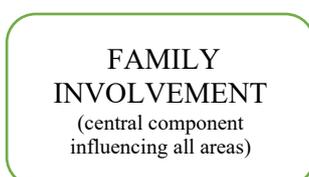
Families applied various practical strategies to sustain consistent self-care behaviors. These strategies included planning low-sugar meals, regulating portion sizes, arranging daily medication routines, and encouraging light physical activities such as walking. Simple reminders and structured household routines were commonly used to support adherence.

Theme 4: Challenges Faced by Families

Families encountered several barriers in providing continuous support, with financial difficulties emerging as a central challenge. Limited financial resources affected families’ ability to afford routine check-ups, diabetes medications, and glucose monitoring tools. These economic barriers were compounded by limited diabetes knowledge, restricted access to healthcare services, and decreased patient motivation. Long-term disease management often led to patient fatigue, making encouragement difficult. Rural geographical conditions further limited regular follow-up visits and access to health education.

Theme 5: Behavioral Changes in Patients

Family involvement contributed to noticeable improvements in patients’ self-care behaviors. Patients became more disciplined in medication adherence, dietary regulation, and physical activity. Several patients also reported improved emotional well-being and increased awareness of the importance of consistent self-care to prevent complications.



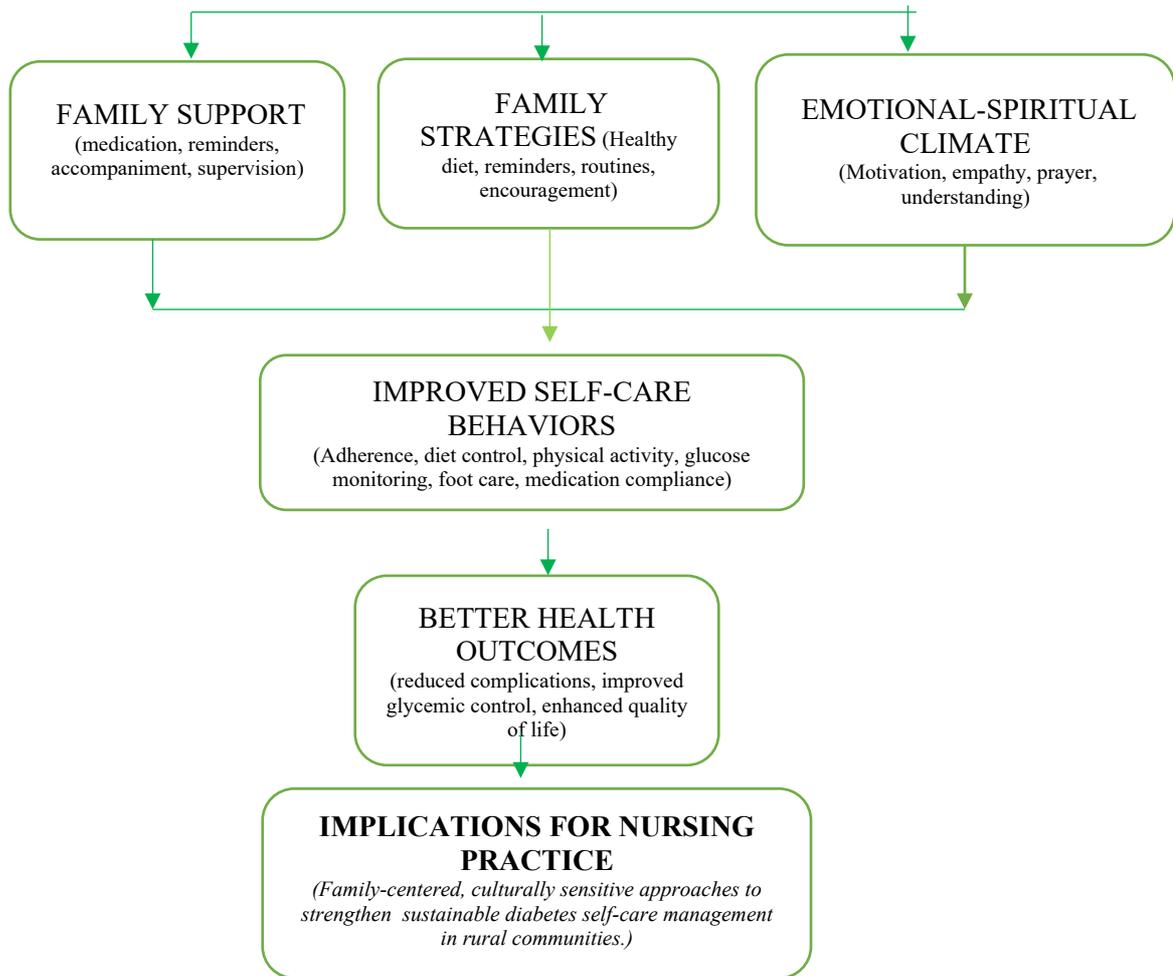


Figure 1. Conceptual Model of Family Involvement in Self-Care Management of T2DM

DISCUSSION

This study explored the role of family involvement in supporting self-care management among patients with Type 2 Diabetes Mellitus in a rural setting. The findings demonstrate that family perceptions, forms of support, practical strategies, experienced challenges, and resulting behavioral changes are interconnected components influencing effective self-care management. These results reinforce the central role of family involvement in diabetes care, consistent with previous family-centered chronic disease management studies (Amani et al., 2025; Hiefner et al., 2024).

Family Perceptions and Responsibilities

The findings show that perceiving diabetes as a chronic condition fostered a sustained sense of responsibility among family members. Beyond practical caregiving, this study highlights that moral and spiritual values served as important coping resources, as reflected in participants' narratives. Values such as patience, sincerity, and reliance on God supported families in maintaining long-term caregiving commitments despite fatigue and emotional challenges.

Spirituality provided emotional meaning to the caregiving role and strengthened family resilience in supporting patients. This finding extends existing evidence by demonstrating that family involvement is shaped not only by practical obligations but also by value-based coping mechanisms that reinforce psychological endurance. This is consistent with Hiefner (2024), who emphasized that shared responsibility enhances self-efficacy and adherence (Hiefner, 2024), and aligns with Suhamdani et al. (2024), who identified cultural and spiritual values as key motivators for sustained family involvement in rural contexts (Suhamdani et al., 2024).

Forms of Family Support

The findings indicate that family support in diabetes management extends beyond practical assistance to include emotional and spiritual dimensions. Emotional and instrumental support facilitated daily adherence and reduced psychological distress, consistent with previous studies highlighting the importance of family involvement in chronic disease management. Importantly, spiritual support emerged from participants' accounts as an active coping mechanism rather than a passive belief. Practices such as prayer and religious activities were integrated into daily caregiving and helped families and patients cope with emotional fatigue and long-term treatment demands.

This finding aligns with Amani et al. (2025), who demonstrated that family-centered empowerment enhances illness acceptance (Amani et al., 2025), and is consistent with Indonesian studies emphasizing spirituality as a significant coping resource in chronic conditions (Suhamdani et al., 2024).

Family Strategies to Support Self-Care

Families employed practical strategies, including meal planning, portion regulation, medication scheduling, and encouraging physical activity. These strategies supported behavioral consistency and reduced the cognitive load of chronic disease management. Similar interventions, when integrated into nursing education programs, were shown to improve self-care practices in other countries (Ibrahim et al., 2024; Magaji et al., 2024). In the present study, these strategies were informal and habit-based, suggesting a need for more structured.

Challenges Faced by Families

Families faced several barriers, including limited diabetes knowledge, economic constraints, restricted access to healthcare services, and patient non-adherence. Low health literacy and financial hardship are widely recognized as predictors of poor self-management (Alrasasimah & Alsabaani, 2024). Psychological fatigue from prolonged treatment emerged as an additional challenge, indicating the need for psychological and counseling support within community-based nursing interventions.

Positive Impacts of Family Involvement

Family involvement contributed to improved medication adherence, better dietary practices, increased physical activity, and enhanced emotional well-being. These findings are consistent with Veronika (2024), who reported that emotional and instrumental support improves treatment adherence (Veronika & Veronika, 2024). Strong family involvement is also associated with improved glycemic outcomes and reduced HbA1c levels (Gu et al., 2025; Hiefner, 2024). The study's results also align with recommendations from the American Diabetes Association and International Diabetes Federation, emphasizing that social and family support are essential for effective diabetes management (Damluji et al., 2024; IDF, 2021)

Significance and Nursing Implications

The findings indicate that family support serves not only as emotional encouragement but also as a protective factor that strengthens patients' motivation, treatment adherence, and autonomy in managing Type 2 Diabetes Mellitus. For community nurses, actively involving family members in health education, care planning, and monitoring of self-care behaviors is essential. Implementing family-centered empowerment programs—particularly during home visits and Posbindu activities—can enhance patients' self-efficacy and compliance with treatment (Amani et al., 2025; Rahman, 2023). Furthermore, incorporating culturally and spiritually sensitive approaches ensures that interventions align with community norms and values, thereby increasing the effectiveness and sustainability of diabetes management (Suhamdani et al., 2024).

Limitations and Future Research Directions

This study was limited by its small sample size and focus on one rural village. Future studies should include larger and more diverse populations and examine long-term outcomes of structured family-based interventions.

CONCLUSION

Family involvement is a critical determinant of effective self-care management in individuals with Type 2 Diabetes Mellitus. Emotional, instrumental, and spiritual support significantly enhance adherence, motivation, and overall health outcomes. The findings underscore the need to integrate family-centered approaches into community nursing practice. Further research should evaluate the long-term effectiveness of culturally tailored family-based interventions.

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REFERENCE

- Akbar, M. A., & Zanzibar. (2023). Dukungan Keluarga dengan Kualitas Hidup Pasien Diabetes Mellitus Tipe II. *Cendekia Medika : Jurnal STIKES Al-Ma'arif Baturaja*, 8(1).
- Alrasasimah, W. A., & Alsabaani, A. (2024). Predictors of Diabetes Self-Management Behaviour Among Type 2 Diabetics in Saudi Arabia: A Cross-Sectional Study. *Diabetes, Metabolic Syndrome and Obesity*, 17(June), 2371–2384. <https://doi.org/10.2147/DMSO.S455193>
- Amani, N., Nazari, A. M., Sanaie, N., Abbasi, A., & Borhani, F. (2025). Effects of family-centered empowerment program on illness acceptance and self-management of patients with type 2 diabetes: a randomized controlled trial. *Scientific Reports*, 15(1), 1–12. <https://doi.org/10.1038/s41598-025-05833-0>
- American Diabetes Association. (2022). Introduction : Standards of Medical Care in Diabetes — 2022. 2022, 45(January), 2021–2022.
- Balitbangkes. (2018). Laporan_Nasional_RKD2018_FINAL.pdf. In *Badan Penelitian dan Pengembangan Kesehatan* (p. 198). http://labdata.litbang.kemkes.go.id/images/download/laporan/RKD/2018/Laporan_Nasional_RKD2018_FINAL.pdf
- Bayan, R. F. (2024). *Angka Penderita Diabetes Melitus Kota Tasikmalaya Tahun 2023*. Open Data.
- Damluji, A. A., Nanna, M. G., Rymer, J., Kochar, A., Lowenstern, A., Baron, S. J., Narins, C. R., & Alkhouli, M. (2024). Chronological vs Biological Age in Interventional Cardiology: A Comprehensive Approach to Care for Older Adults: JACC Family Series. *JACC: Cardiovascular Interventions*, 17(8), 961–978. <https://doi.org/https://doi.org/10.1016/j.jcin.2024.01.284>
- Dewi, I. K., Dedi, B., Safarina, L., Inayah, I., & Murtiningsih, M. (2022). Rancangan Model Pemberdayaan Keluarga Pasien terhadap Perawatan Diri (Self Care) Pasien DM Tipe 2. *Jurnal Keperawatan Silampari*, 6(1), 488–496. <https://doi.org/10.31539/jks.v6i1.4325>
- Febri, B., Malini, H., & Zuela, S. (2024). Hubungan Persepsi Penyakit dan Durasi Menderita terhadap Manajemen Perawatan Diri pada Penderita Diabetes Mellitus. 20(2), 56–65.
- Gu, S., Zhang, N., Shen, F., Zhou, Y., Yang, W., Song, B., & Wang, X. (2025). The Relationships Among Family Involvement, Diabetes Self-Management and Glycaemic Control in Patients With Type 2 Diabetes: A Cross-Sectional Study. *Journal of Advanced Nursing*.
- Hiefner, A. R. (2024). Family Support and Type 2 Diabetes Self-management Behaviors in Underserved Latino / a / x Patients Family Support and Type 2 Diabetes Self-management Behaviors in Underserved Latino / a / x Patients. May. <https://doi.org/10.1093/abm/kaae023>
- Hiefner, A. R., Raman, S., & Woods, S. B. (2024). Family support and type 2 diabetes self-management behaviors in underserved Latino/a/x patients. *Annals of Behavioral Medicine*, 58(7), 477–487.
- Ibrahim, A. M., Gano, F. A. E. L., Abdel-Aziz, H. R., Elneblawi, N. H., Zaghmir, D. E. F., Negm, L. M. M. A., Sweelam, R. K. M., Ahmed, S. I., Mohamed, H. A. O., hassabelnaby, F. gamal elsaid, & Kamel, A. M. (2024). Tailoring nursing interventions to empower patients: personal coping strategies and self-management in type 2 diabetes care. *BMC Nursing*, 23(1).

- <https://doi.org/10.1186/s12912-024-02573-w>
- IDF. (2021). International Diabetes Federation. In *Diabetes Research and Clinical Practice* (10 edition, Vol. 102, Issue 2). IDF Diabetes Atlas 2021. <https://doi.org/10.1016/j.diabres.2013.10.013>
- Magaji, H. Y., Olawumi, A. L., Ogunyele, T. T., Umar, A. I., Michael, G. C., & Grema, B. A. (2024). Influence of Family Function on Self-care Practice among Type 2 Diabetes Patients in a Primary Care Clinic in Northern Nigeria. *Nigerian Journal of Basic and Clinical Sciences*, 21(2), 137–144. https://doi.org/10.4103/njbc.njbc_3_24
- Maryati, S., Studi, P. S., & STIKES Mitra Adiguna Palembang, K. (2024). Peran Keluarga Dalam Mengendalikan Kadar Glukosa Darah Lansia Dengan Diabetes Mellitus. *Jurnal Kesehatan Tambusai*, 5(1), 1944–1955.
- Muzharaffah, F. S., & Simamora, S. R. R. (2023). Hubungan Dukungan Keluarga Dengan Kepatuhan Kontrol Gula Darah Pada Penderita Diabets Melitus (DM). *Jurnal Penelitian Perawat Profesional*, 2(5474), 1333–1336.
- Pangastuti, T. E., Riyanti, E., Yarden, N., & Nurdahlia, N. (2024). Importance of Family Emotional Support for Adherence to Taking Diabetic Medication in Elderly People with Diabetes Mellitus. *Journal of Health and Cardiovascular Nursing*, 4(2), 96–103. <https://doi.org/10.36082/jhcn.v4i2.1933>
- Rahman, A. (2023). *PROSEDING KESLING DAN KEPERAWATAN 2020 S/D 2024*.
- Suhamdani, H., Yusuf, A., Ernawaty, E., & Sulistyono, A. A. H. (2024). Patients' experiences in receiving family support for type-2 diabetes mellitus: A scoping review. *African Journal of Reproductive Health*, 28(10), 411–420.
- Veronika, E. N., & Veronika, E. N. (2024). The Influence of Family Support on Therapy Adherence in Diabetes Patients : A Mixed-Methods Study. *International Journal on Health and Medical Sciences*, 2(3), 114–123.