

**Resilience and Quality of Life in People with Diabetes Mellitus****Dwi Yuniar Ramadhani^{1*}, Siti Hardiyanti¹**¹ Adi Husada College of Health Surabaya, Indonesia**Submitted: 25 May 2026, Review: 28 May 2026, Accepted: 29 June 2026.****Correspondent Author:**

Dwi Yuniar Ramadhani

Email:

niar.dwiuniar@gmail.com

Keywords :Diabetes Mellitus,
Resilience, Quality of Life**Abstract**

Diabetes mellitus is a highly complex health issue. It causes both physical and psychological impairments, thereby hindering resilience and affecting quality of life. This study aims to analyze the relationship between resilience and quality of life in people with diabetes mellitus. The study employed a cross-sectional correlational design with purposive sampling, involving a sample size of 45 participants who met the criteria of being DM patients aged 20–75 years and willing to participate in the study. The Connor Davidson Resilience Scale (CD-RISC) was used to measure resilience, and the Diabetes Quality of Life (DQOL) questionnaire was used to assess quality of life. The statistical test used was the Pearson Product-Moment correlation. The results showed that the proportion of participants with high quality of life in the high-resilience group was 70.6%, compared to 21.4% in the low-resilience group, with a p-value of 0.03. This indicates a significant relationship between resilience and quality of life. Resilience particularly the self-control component needs to be enhanced as an integral part of nursing care and health education, as it plays a major role in achieving a better quality of life for people with diabetes mellitus.

INTRODUCTION

Diabetes is a health problem that threatens the well-being and quality of life of those affected (Onyishi et al., 2022). Diabetes mellitus (DM) is a chronic metabolic disease characterized clinically by abnormally high blood glucose levels and is considered a metabolic syndrome (Ramalingam et al., 2025). Non-insulin-dependent type 2 diabetes mellitus (NIDDM) is a chronic condition that causes physical and psychological impairments, thereby hindering patients' resilience and activities of daily living (ADL), which in turn affects their quality of life (Mei et al., 2023a; Nurdiana et al., 2026; Ramalingam et al., 2025).

Resilience is a person's capacity not only to endure but also to adapt when facing stressful and difficult situations (Utama et al., 2022). Resilience in people with diabetes is positively associated with better health management, including self-care practices, medication adherence, quality of life, and how patients cope with their illness and pain. People with diabetes who have high resilience are more likely to engage in self-care activities such as exercise, dietary management, medication therapy, and blood sugar control (Wilson et al., 2017). People with low resilience feel less capable of solving problems in certain situations and conditions they face. Resilience is the ability to face challenges; this becomes evident when a person encounters difficult experiences and knows how to cope with or adapt to their illness (Naryati & Setiawati, 2022).

Quality of life is a very broad concept that influences a person's physical health, psychological well-being, level of dependence, social relationships, self-confidence, and interactions with key environmental factors (Siallagan et al., 2023). Diabetes mellitus (DM) is an incurable disease; this can affect the quality of life of patients with DM. If a patient's quality of life is not properly managed, it can lead to various life-threatening complications (Deski, 2023). Poor quality of life can lead to reduced self-care and ultimately result in worsening glycemic control and an increased risk of complications.

Quality of life refers to a sense of satisfaction and happiness that enables patients with diabetes to carry out their daily activities (Indah et al., 2023).

The Riskesdas findings indicate that diabetes mellitus (DM) ranks fourth in Indonesia (Balitbang, 2013). Meanwhile, in the city of Surabaya, type 2 DM ranks second, with 61,024 cases (Surabaya, 2024). The prevalence of DM, based on medical diagnosis and symptoms, increases with age but tends to decline starting at age 65 and older (Balitbang, 2013).

The results of a study (Aslani et al., 2026) indicate that resilience is a significant predictor of quality of life in patients with type 2 diabetes, with a regression coefficient ($\beta = 0.214$, $p < 0.001$) indicating a fairly strong predictive power. (Pratiwi et al., 2026), in their systematic review, revealed that individuals with higher levels of psychological resilience tend to have better blood sugar control, as reflected by lower HbA1c levels. Research findings (Ting et al., 2025) show that resilience significantly mediates the relationship between self-efficacy and quality of life in patients with type 2 diabetes ($\beta = -0.153$, $p < 0.001$). These findings suggest that interventions aimed at improving self-efficacy can effectively enhance resilience, which ultimately improves patients' quality of life. This mediating effect accounted for 43.1% of the total effect, indicating a highly substantial contribution.

In general, much of the research conducted has focused on identifying the relationship between resilience and quality of life among people with diabetes mellitus. This study will identify the most dominant factors of resilience related to quality of life. The objectives of this study are to analyze the relationship between resilience and quality of life and to identify the dominant factors related to quality of life among people with diabetes mellitus in RW 3–5, Pacar Kembang Village, Tambaksari Subdistrict, Surabaya City.

RESEARCH METHODOLOGY

The research design used was correlational with a cross-sectional approach. The population consisted of all individuals with diabetes mellitus (DM) in RW 3–5 of Pacar Kembang Village, Tambaksari Subdistrict, Surabaya City; the population comprised 51 people with DM, while the sample size was 45 people. The sampling technique used was purposive sampling. The inclusion criteria for the study were that respondents be between 20 and 75 years of age, willing to participate, and willing to sign an informed consent form. The study was conducted from October to December 2024. The questionnaires used were the Connor Davidson Resilience Scale (CD-RISC) for resilience, consisting of 25 items, and the Diabetes Quality of Life (DQOL) scale for quality of life, consisting of 30 items. Categories were determined based on the mean scores of both variables: 77.2 for resilience and 80.4 for quality of life. Based on these mean scores, the category thresholds were defined as follows: for resilience, “good” ≥ 78.4 and “poor” < 78.4 ; for quality of life, “high” ≥ 80.4 and “low” < 80.4 . The statistical tests used were the Pearson Product-Moment correlation and linear regression analysis. The Pearson Product-Moment test was used because the data were normally distributed, while the linear regression test was used to identify dominant factors associated with quality of life. Respondents will be provided with an informed consent form indicating their willingness to participate in the study. Ethical clearance is outlined in letter number: 511.A/Ket/PPM/STIKES-AH/IX/2024.

RESULTS

The research results will present several sets of data: general data on respondent characteristics, and specific data on resilience and quality of life. Table 1 shows that the largest group of respondents was aged 41–45 years (27%), and the majority were male (56%). In terms of education level, the majority had a college degree (47%), and in terms of occupation, the majority were private-sector employees (44%). The majority of respondents (62%) had no complications, and the majority had had diabetes for less than 5 years (51%).

Table 1. Characteristics of Respondents with Diabetes Mellitus in RW 3–5, Pacar Kembang Village, Tambaksari Subdistrict, Surabaya City (N=45)

Characteristics	F	%
Age		
31-35 years	3	7%
36-40 years	9	20%
41-45 years	12	27%
46-50 years	11	24.5%
51-55 years	6	13%
56-60 years	2	4.5%
61-65 years	0	0
66-70 years	1	2%
71-75 years	1	2%
Gender		
Male	25	56%
Female	20	44%
Educational Level		
No schooling	4	9%
Elementary School	3	7%
Junior High School	2	4%
High School	15	33%
College	21	47%
Employment		
Not working	2	4.3%
Retired	2	4.3%
Stay-at-home mom	12	27%
Civil Servant	1	2.1%
Private sector	20	44.3%
Self-Employed	8	18%
Complications		
Present	17	38%
None	28	62%
Duration of Diabetes		
< 5 years	23	51%
≥ 5 years	22	49%

Table 2. Frequency Distribution of Resilience Among People with Diabetes Mellitus in RW Zones 3–5, Pacar Kembang Village, Tambaksari Subdistrict, Surabaya City (N=45)

Resilience	F	%	Min-Max	Mean
Low	28	62.2%	47-100	77.2
Good	17	37.8%		
Total	45	100%		

Table 2 shows that the majority of people with diabetes mellitus in RW 3–5 have low resilience (62.2%) from total 45 respondents. The score of resilience among people with diabetes mellitus range from 47 to 100 and an average score of 77.2.

Table 3. Quality of Life of People with Diabetes Mellitus in RW Zones 3–5, Pacar Kembang Village, Tambaksari Subdistrict, Surabaya City (N=45)

Quality of Life	F	%	Min-Max	Mean
Low	27	60%	54-110	80.42
High	18	40%		
Total	45	100%		

Table 3 shows that the majority of people with diabetes mellitus in RW 3–5 have a low quality of life (60%) from total 45 respondents. The score of quality of life among people with diabetes mellitus range from 54 to 110 and an average score of 80.42.

Table 4. Analysis of the Relationship Between Resilience and Quality of Life Among People with Diabetes Mellitus in RW 3–5, Pacar Kembang Village, Tambaksari Subdistrict, Surabaya City (N=45)

Resilience	Quality of Life				Total		OR (95%CI)	P value	r
	Low		High						
	F	%	F	%	F	%			
Less	22	78.6%	6	21.4%	28	100%	8.800 2.2-34.9	0.03	0.487
Good	5	29.4%	12	70.6%	17	100%			
total	27	60%	18	40%	45	100%			

Table 4 shows that the proportion of participants with a high quality of life in the high-resilience group (70.6%) was greater than that in the low-resilience group (21.4%), and this difference was statistically significant (p-value = 0.03). These results indicate that there is a moderate association (r = 0.487) between resilience and quality of life among people with diabetes mellitus in RW 3–5, Pacar Kembang Village, Tambaksari Subdistrict, Surabaya City.

Table 5. Results of the Multivariate Analysis of Candidate Variables Associated with Quality of Life in People with Diabetes Mellitus in RW Zones 3–5, Pacar Kembang Village, Tambaksari Subdistrict, Surabaya City (N=45)

Resilience Variable	P value
Personal Competencies	0.939
Acceptance of Change & Secure Relationships	0.650
Trust/Tolerance/Stress Resilience	0.707
Spiritual Influence	0.294
Control	0.000

Table 5 shows the most significant variable influencing the relationship between resilience and quality of life in RW 3–5 of Pacar Kembang Village, Tambaksari Subdistrict, Surabaya City, namely “control,” with a p-value of 0.000.

DISCUSSION

Most respondents were between the ages of 41 and 45, which falls within the productive adult age range; as such, they still possess good physical and cognitive abilities to manage diabetes mellitus. At this age, patients tend to be better able to understand health education, adhere to treatment regimens, and independently manage their diet and physical activity. Research indicates that patients with diabetes mellitus (DM) in their productive years have better self-management and adaptive abilities, allowing them to maintain an optimal quality of life (Teli et al., 2023).

Advancing age in patients with diabetes mellitus can lead to a decline in metabolic function and insulin sensitivity, thereby increasing the risk of disease complications. Advancing age is also associated with reduced physical capacity, the onset of comorbidities, and increased psychological stress, all of which can affect patients' quality of life. Research shows that older patients with diabetes mellitus tend to experience a decline in health-related quality of life due to activity limitations and chronic health conditions (Mendorf et al., 2023).

Based on the results, the majority of participants in this study were male, which had a positive impact because men tend to have higher levels of physical activity and work productivity, thereby helping to control blood sugar levels and maintain physical condition. In addition, men generally have good mobility, which supports their daily activities and adherence to treatment. Research indicates that gender can influence the quality of life of patients with diabetes, with men in some cases demonstrating better physical quality of life than women due to more stable psychological conditions (Ciarambino et al., 2022).

Being male also has negative implications, as men are at higher risk of adopting unhealthy lifestyles such as smoking, consuming high-fat foods, poor dietary habits, and low adherence to routine health checkups. These factors can lead to poor glycemic control and increase the risk of diabetes complications, which in turn reduce patients' quality of life. International research indicates that gender differences affect the quality of life of people with diabetes, as both men and women can experience diabetes distress, psychological disorders, and complications that worsen their health if disease management is suboptimal (Zahra et al., 2025).

Most respondents had a college education, which had a positive impact on patients' ability to understand health information and manage diabetes mellitus. A higher level of education helps patients more readily accept education regarding diet, physical activity, medication adherence, and blood sugar control, thereby enabling them to maintain a good quality of life. Research indicates that education is one of the factors associated with the quality of life of patients with diabetes mellitus, as individuals with higher education have better self-management skills and health literacy (Tamornpark et al., 2022).

A low educational level among some respondents can negatively impact patients' ability to understand their condition and manage it. A lack of knowledge regarding diet, physical activity, medication use, and the prevention of complications can lead to suboptimal blood sugar control, thereby increasing the risk of complications and reducing patients' quality of life. Research indicates that educational level has a significant association with the quality of life of patients with diabetes mellitus, with lower education being associated with poorer self-care skills and health literacy (Nasriyah & Marselin, 2021).

Most respondents work as private-sector employees, which has a positive impact because employed individuals generally have a steady income, enabling them to cover the costs of medical treatment and health checkups, as well as maintain a healthy lifestyle for people with diabetes mellitus. Employment can also enhance patients' social interactions and motivation to maintain their health so they can remain productive in their daily activities. Research indicates that employment status and socioeconomic conditions are associated with the quality of life of patients with diabetes mellitus (DM), with employed individuals tending to have a better quality of life compared to those who are unemployed (Tamornpark et al., 2022).

Employment can also have negative effects if patients experience work-related pressure, fatigue, and prolonged stress, which can impair blood sugar control in people with diabetes mellitus. A demanding work schedule often causes patients to neglect their diet, medication adherence, physical activity, and routine health check-ups, which can increase the risk of disease complications. Other studies have shown that certain employment statuses, particularly high-demand jobs, are associated with low adherence to health management among patients with diabetes mellitus, which can worsen their quality of life and health status (Nakayama et al., 2022).

The results of this study indicate that the majority of respondents did not have complications, which has a positive impact on the physical condition and quality of life of people with diabetes mellitus. The absence of complications allows patients to continue performing daily activities independently, maintain physical function, and have a more stable psychological state while undergoing treatment. International research indicates that patients with diabetes mellitus (DM) without complications have a better quality of life compared to those with complications, as their health

condition remains relatively well-controlled and they do not experience severe limitations in their activities (Homagarani et al., 2023).

Complications in patients with diabetes mellitus can have negative effects, such as a decline in physical function, limitations in activities, and increased dependence in performing daily activities. Complications such as neuropathy, retinopathy, nephropathy, and diabetic ulcers can also cause psychological stress, anxiety, and a decline in patients' quality of life due to the worsening of their condition. International research shows that patients with chronic complications of diabetes have a lower quality of life compared to those without complications due to the increased physical and psychological distress they experience (Wirkkala et al., 2023).

The results of this study indicate that the majority of respondents have had diabetes mellitus for less than 5 years, which is a positive factor because the condition is still relatively manageable and chronic complications have not yet developed significantly. A shorter duration of the disease helps patients maintain their physical condition, stay motivated to follow treatment, and adapt to lifestyle changes, thereby ensuring that their quality of life remains good. International research indicates that patients with a shorter duration of DM tend to have a better health-related quality of life compared to patients who have had the disease for a longer period (Zeng et al., 2023).

A longer duration of diabetes mellitus can have negative effects, such as an increased risk of complications, a decline in physical function, and the onset of psychological fatigue due to long-term treatment. Patients who have had DM for a long time also tend to experience diabetes distress, reduced motivation for self-care, and limitations in daily activities, leading to a decline in quality of life. International research indicates that a longer duration of DM is associated with lower quality of life due to increased physical complications and mental health disorders among people with diabetes (Alzahrani et al., 2023).

The results show that the majority of respondents 62.2% exhibited low resilience, while 37.8% demonstrated good resilience. Good resilience has a positive impact because patients are able to adapt to their chronic condition, possess strong coping skills, and remain motivated to undergo treatment and adopt a healthy lifestyle. Research indicates that high resilience in patients with diabetes mellitus is associated with improved self-management, treatment adherence, and a better quality of life, as patients are able to manage stress and accept their condition in a positive manner (Wardika et al., 2024).

Conversely, low resilience among the majority of respondents has a negative impact because patients tend to struggle with stress resulting from chronic illness, feel hopeless, and are less able to adapt to the lifestyle changes required for managing diabetes mellitus. These conditions can lead to low motivation for self-care, non-adherence to treatment, and an increase in psychological distress such as anxiety and depression, which negatively affect patients' quality of life. Other studies have shown that low resilience in patients with diabetes mellitus is associated with poor quality of life and increased psychological distress resulting from an inability to cope with the burden of long-term illness (Mei et al., 2023b).

The results show that the majority of respondents 60% have a low quality of life, while 40% have a high quality of life. The low quality of life among the majority of respondents has a negative impact, as patients may experience limitations in physical activity, psychological distress, and a decline in their ability to perform daily activities due to their illness. A low quality of life can also cause patients to feel stressed, anxious, and less motivated to adhere to treatment or practice self-care, thereby increasing the risk of diabetes mellitus complications. Research indicates that a low quality of life in patients with diabetes mellitus is associated with increased diabetes distress, chronic complications, and poor glycemic control, all of which impact the patients' overall health (Abualhamael et al., 2023).

Conversely, a high quality of life has a positive impact because patients are able to maintain their physical and psychological well-being, social relationships, and daily activities despite having diabetes mellitus. Patients with a good quality of life tend to have better treatment adherence, self-management skills, and more optimal blood sugar control, thereby reducing the risk of complications and improving their overall well-being. Research indicates that a good quality of life in patients with diabetes mellitus is associated with strong adaptive coping skills for chronic illness and optimal psychosocial support (Wicaturatmashudi et al., 2024).

The results show that respondents with low resilience mostly had a low quality of life (78.6%), while respondents with good resilience mostly had a high quality of life (70.6%). Statistical test results

showed a p-value of 0.03 (<0.05) with a correlation coefficient of $r = 0.487$, indicating a moderate relationship between resilience and quality of life in patients with diabetes mellitus. This suggests that the higher a patient's resilience, the better their ability to adapt to chronic illness, manage stress, maintain treatment motivation, and practice diabetes self-management thereby improving their quality of life. Research indicates that psychological resilience has a positive influence on the quality of life of patients with diabetes mellitus because it helps patients cope with emotional stress and the challenges of chronic illness in a more adaptive manner (Mei et al., 2023b).

Conversely, respondents with low resilience tend to have a lower quality of life because they are more prone to diabetes distress, anxiety, psychological fatigue, and difficulty adapting to the lifestyle changes required for managing diabetes mellitus. Low resilience can also lead to poor adherence to treatment and self-care, thereby worsening health status and increasing the risk of disease complications (Mahajan & Muley, 2024). Other studies also indicate that the quality of life of people with diabetes mellitus is influenced by psychological and social factors, health behaviors, and an individual's ability to maintain emotional balance while living with a chronic disease. Patients with high resilience tend to be better able to maintain their mental health, social relationships, and quality of life despite facing various limitations due to diabetes (Parviniannasab et al., 2024).

The results of the multivariate analysis indicate that the control variable a dimension of resilience is most strongly associated with the quality of life of people with diabetes mellitus in RW 3–5, Pacar Kembang Village, Tambaksari Subdistrict, Surabaya City, with a p-value of 0.000. This finding indicates that the better an individual's ability to control their self, emotions, and behaviors related to disease management, the better their quality of life. For people with diabetes, self-control plays a crucial role in maintaining adherence to treatment, managing dietary habits, engaging in regular physical activity, and monitoring blood sugar levels periodically. Research by Cho et al. (2022) states that good self-care behaviors have a positive effect on the quality of life of diabetes patients; thus, the better an individual's ability to manage their condition, the better their perceived quality of life (Cho et al., 2022).

Low self-control among people with diabetes mellitus has the potential to lead to a decline in quality of life. An inability to control health-related behaviors can result in non-adherence to treatment, uncontrolled dietary habits, insufficient physical activity, and poor blood glucose management all of which can increase the risk of chronic complications. Research indicates that resilience has a positive association with quality of life in patients with type 2 diabetes mellitus and chronic complications; thus, low self-control as a component of resilience can be a factor that worsens patients' quality of life. Consequently, it may hinder the success of care for patients with diabetes mellitus (Wardika et al., 2024).

CONCLUSION

Resilience is an important psychological factor that plays a role in helping people with diabetes mellitus maintain their quality of life while living with this chronic disease. A patient's ability to adapt, manage stress, and maintain motivation for treatment and self-management can influence their overall physical, psychological, and social well-being. Therefore, enhancing resilience should be an integral part of nursing care and health education for people with diabetes mellitus to support the achievement of a better quality of life. Future research is expected to develop a quasi-experimental study design, incorporate additional variables, and include a larger sample size and broader geographic coverage so that the results can be generalized to a more diverse population of people with diabetes mellitus.

REFERENCES

- Abualhamael, S. A., Baig, M., Alghamdi, W., Gazzaz, Z. J., Al-Hayani, M., & Bazi, A. (2023). Quality of life, stress, anxiety and depression and associated factors among people with type 2 diabetes mellitus in Western region Saudi Arabia. *Frontiers in Psychiatry*, 14. <https://doi.org/10.3389/fpsy.2023.1282249>
- Aslani, F., Gheibizadeh, M., Ghanbari, S., & Jahanshahi, A. (2026). Investigating The Role of Health Literacy, Resilience, and Adherence to Treatment in Predicting Quality of Life in

- Patients with Type 2 Diabetes. *Journal of Education and Health Promotion*, 15, 1–9. https://doi.org/10.4103/jehp.jehp_1948_24
- Alzahrani, O., Fletcher, J. P., & Hitos, K. (2023). Quality of life and mental health measurements among patients with type 2 diabetes mellitus: a systematic review. In *Health and Quality of Life Outcomes* (Vol. 21, Number 1). BioMed Central Ltd. <https://doi.org/10.1186/s12955-023-02111-3>
- Balitbang. (2013). *Riset KESEHATAN DASAR Riskesdas 2013*.
- Cho, S. E., Kwon, M., & Kim, S. A. (2022). Influence of Diabetes Knowledge, Self-Stigma, and Self-Care Behavior on Quality of Life in Patients with Diabetes. *Healthcare (Switzerland)*, 10(10). <https://doi.org/10.3390/healthcare10101983>
- Ciarambino, T., Crispino, P., Leto, G., Mastrolorenzo, E., Para, O., & Giordano, M. (2022). Influence of Gender in Diabetes Mellitus and Its Complication. In *International Journal of Molecular Sciences* (Vol. 23, Number 16). MDPI. <https://doi.org/10.3390/ijms23168850>
- Deski, F. I. (2023). *Pengaruh Mastery Learning terhadap Kompetensi Perawat Melakukan Pengkajian dan Perawatan Luka Ulkus Diabetikum di Rumah Sakit Aisyiyah Pariaman Tahun 2023*. Universitas Andalas.
- Homagarani, Y. M., Adlparvar, K., Teimuri, S., Tarrahi, M. J., & Nilchian, F. (2023). *The effect of diabetes mellitus on oral health-related quality of life: A systematic review and meta-analysis study*. https://www.crd.york.ac.uk/prospero/display_re
- Indah, N., Haskas, Y., & BN, I. R. (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.
- Mahajan, A., & Muley, A. (2024). Assessment of lifestyle factors, stress levels, and quality of life among people with Type 2 Diabetes Mellitus. *Discover Public Health*, 21(1). <https://doi.org/10.1186/s12982-024-00173-2>
- Mei, Y., Yang, X., Gui, J., Li, Y., Zhang, X., Wang, Y., Chen, W., Chen, M., Liu, C., & Zhang, L. (2023a). The Relationship Between Psychological Resilience and Quality of Life Among The Chinese Diabetes Patients: The Mediating Role of Stigma and The Moderating Role of Empowerment. *BMC Public Health*, 23(2043), 1–11. <https://doi.org/https://doi.org/10.1186/s12889-023-16927-7>
- Mendorf, S., Heimrich, K. G., Mühlhammer, H. M., Prell, T., & Schöenberg, A. (2023). Trajectories of quality of life in people with diabetes mellitus: results from the survey of health, ageing and retirement in Europe. *Frontiers in Psychology*, 14. <https://doi.org/10.3389/fpsyg.2023.1301530>
- Nakayama, I., Goto, A., Hayashino, Y., Suzuki, H., Yamazaki, K., Izumi, K., & Noda, M. (2022). Employment status and diabetic outpatient appointment non-attendance in middle to senior working generation with type 2 diabetes: the Japan diabetes outcome intervention trial-2 large-scale trial 005 (J-DOIT2-LT005). *Acta Diabetologica*, 59(6), 793–801. <https://doi.org/10.1007/s00592-022-01869-0>
- Naryati, N., & Setiawati, Y. (2022). Hubungan Kesejahteraan Spiritual dengan Kemampuan Resiliensi pada Penderita Diabetes Millitus Tipe 2 di Ruang Rawat Inap Rumah Sakit Tingkat II Moh. Ridwan Meuraksa. *MANUJU: Malahayati Nursing Journal*, 4(8), 2132–2146. <https://doi.org/https://doi.org/10.33024/mnj.v4i8.6936>
- Nasriyah, C., & Marselin, A. (2021). The effects of complications, frequency of control and education level on quality of life of type 2 diabetes mellitus patients. *International Journal Of Community Medicine And Public Health*, 8(11), 5206. <https://doi.org/10.18203/2394-6040.ijcmph20214040>
- Nurdiana, N., Kilo, M. F. H., & Basri, B. (2026). Hubungan Efikasi Diri dengan Kualitas Hidup dan Resiliensi pada Pasien Diabetes Melitus di Ruangan Rawat Inap RSUD Mokopido Tolitoli. *Jurnal Pengabdian Masyarakat Dan Riset Pendidikan*, 4(4), 23363–23376. <https://doi.org/https://doi.org/10.31004/jerkin.v4i4.5861>
- Onyishi, C. N., Eseadi, C., Ilechukwu, L. C., Okoro, K. N., Okolie, C. N., Egbule, E., Asogwa, E., Okoro, K. N., Okolie, C. N., Egbule, E., & Asogwa, E. (2022). Potential Influences of Religiosity and Religious Coping Strategies on People with Diabetes. *World Journal of Clinical Cases*, 10(25), 8816–8827. <https://doi.org/10.12998/wjcc.v10.i25.8816>
- Parviniannasab, A. M., Faramarzian, Z., Hosseini, S. A., Hamidzadeh, S., & Bijani, M. (2024). The effect of social support, diabetes management self-efficacy, and diabetes distress on resilience

- among patients with type 2 diabetes: a moderated mediation analysis. *BMC Public Health*, 24(1). <https://doi.org/10.1186/s12889-024-18022-x>
- Pratiwi, I. N., Widyawati, I. Y., Dewi, L. C., & Chan, C. M. (2026). Association between Psychological Resilience and Glycemic Control in Young Adults With Newly Diagnosed Diabetes: A Systematic Review. *International Journal of Africa Nursing Sciences*, 24, 1–10. <https://doi.org/10.1016/j.ijans.2026.101007>
- Ramalingam, P., M, S., J, J., N, H., Ramanathan, K., Subramanian, S. S., Alhalaiqa, F., Samhan, G., & Abdelhadi, L. (2025). A Study to Assess the Level of Resilience and Quality of Life Among Patients with Diabetes Mellitus at Selected Villages Under Rural Health and Training Centre. *Retos*, (68), 1721–1728. <https://doi.org/https://doi.org/10.47197/re-tos.v68.114530>
- Siallagan, A., Sinurat, S., & Gulo, P. (2023). Spiritualitas Dan Kualitas Hidup Penderita Diabetes Melitus Di Wilayah Kerja Puskesmas Balam Medan. *Gema Kesehatan*, 15(2), 130–138. <https://doi.org/10.47539/gk.v15i2.427>
- Surabaya, D. K. K. (2024). *Laporan Tahunan Tahun 2023*.
- Tamornpark, R., Utsaha, S., Apidechkul, T., Panklang, D., Yeemard, F., & Srichan, P. (2022). Quality of life and factors associated with a good quality of life among diabetes mellitus patients in northern Thailand. *Health and Quality of Life Outcomes*, 20(1). <https://doi.org/10.1186/s12955-022-01986-y>
- Ting, Z., Huicai, W., Kudelati, Z., Yongkang, G., Alimu, A., Xiaotian, Z., Xingge, Q., & Tong, L. (2025). Exploring the Dynamics of Self-Efficacy, Resilience, and Self-Management on Quality of Life in Type 2 Diabetes Patients : A Moderated Mediation Approach from A Positive Psychology Perspective. *PLOS One*, 20(1), 1–18. <https://doi.org/https://doi.org/10.1371/journal.pone.0317753>
- Teli, M., Thato, R., & Rias, Y. A. (2023). Predicting Factors of Health-Related Quality of Life Among Adults With Type 2 Diabetes: A Systematic Review. In *SAGE Open Nursing* (Vol. 9). SAGE Publications Inc. <https://doi.org/10.1177/23779608231185921>
- Utama, G. Y., Prapti, N. K. G., & Widyantari, D. M. (2022). Hubungan Self Efficacy dengan Resiliensi pada Pasien Diabetes Melitus Tipe 2. *Jurnal Keperawatan*, 14(3), 731–738.
- Wardika, I. J., Widayati, N., & Ridla, A. Z. (2024). Resilience and Quality of Life on Type 2 Diabetes Mellitus Patients with Chronic Complications. *Nursing and Health Sciences Journal (NHSJ)*, 4(2), 150–158. <https://doi.org/10.53713/nhsj.v4i2.311>
- Wicaturatmashudi, S., Soewondo, P., Dahlia, D., Asih, S. R., Gayatri, D., & Aryani, R. (2024). Impact of Self-Management on the Quality of Life of Patient with Diabetes Mellitus: A Systematic Review. *Jurnal Promkes*, 12(1), 120–128. <https://doi.org/10.20473/jpk.v12.i1.2024.120-128>
- Wilson, A. L., Mcnaughton, D., Meyer, S. B., & Ward, P. R. (2017). Understanding the links between resilience and type-2 diabetes self-management: a qualitative study in South Australia. *Archives of Public Health*, 75(56), 1–13. <https://doi.org/10.1186/s13690-017-0222-8>
- Wirkkala, J., Kubin, A.-M., Ohtonen, P., Falck, A., & Hautala, N. (2023). Outcomes of 35-year duration of type 1 diabetes and proliferative diabetic retinopathy on functional vision and quality of life: Benefits of good glycemic control. *Journal of Diabetes and Its Complications*, 37(2).
- Zahra, K., Khan, S., & Sadia, R. (2025). Gender Difference across Diabetes Distress, Cognitive Emotional Regulation, and Diabetes Related Quality of Life among Type II Diabetics. *Foundation University Journal of Psychology*, 9(2). <https://doi.org/10.33897/fujp.v9i2.783>
- Zeng, Z., Wang, X., Chen, Y., Zhou, H., Zhu, W., Xiong, X., Tang, J., & Zhao, Q. (2023). Health-related quality of life in Chinese individuals with type 2 diabetes mellitus: a multicenter cross-sectional study. *Health and Quality of Life Outcomes*, 21(1). <https://doi.org/10.1186/s12955-023-02183-1>