MINH
MALAHAYATI INTERNATIONAL JOURNAL OF NURSING AND HEALTH SCIENCE
ISSN 2620-9152 (Print)
ISSN 2621-4083 (Online)
DOI: 10.33024
Nomor: 79/E/KPT/2023

ARTICLE INFORMATION
Received: January, 7, 2026
Revised: January, 31, 2026
Available online: January, 31, 2026
at : https://e-jurnal.iphorr.com/index.php/minh

Self-efficacy with self-management among patients with diabetes mellitus

Trina Kurniawati, Eka Budiarto*, Nur Intan Kusuma

Fakultas Ilmu Kesehatan, Universitas Muhammadiyah Pekajangan Pekalongan
Corresponding author: *E-mail: ekabudiarto4321@gmail.com

Abstract

Background: Poorly controlled diabetes mellitus increases the risk of serious complications, making effective self-care management essential. Self-care behaviors are influenced by multiple factors, with self-efficacy recognized as a key psychological component affecting an individual's capacity to manage chronic illnesses such as diabetes.
Purpose: To examine the association between self-efficacy and self-care management among patients with diabetes mellitus.
Method: A correlational study with a cross-sectional design was conducted using purposive sampling. A total of 36 respondents were included. Data were collected using the Diabetes Management Self-Efficacy Scale (DMSES) and the Summary of Diabetes Self-Care Activities (SDSCA). Statistical analysis was performed using the Pearson correlation test.
Results: The analysis revealed a statistically significant relationship between self-efficacy and self-care management in patients with diabetes mellitus ($p = 0.014$).
Conclusion: Lower levels of self-efficacy among individuals with diabetes mellitus significantly hinder the implementation of effective self-care management. Insufficient confidence in managing their condition leads patients to act inconsistently with recommended health behaviors. Consequently, strengthening self-efficacy and motivation is essential to improve adherence to diabetes management.

Keywords: Diabetes Mellitus; Self-Efficacy; Self-Management.

INTRODUCTION

Diabetes mellitus is a disease caused by elevated blood sugar levels. Diabetes is a serious, non-communicable chronic disease, characterized by the pancreas's inability to produce insulin optimally. Diabetes is a widespread health problem and its incidence continues to rise year after year, making it a global priority for addressing this health issue (Lukitasari, Kristiyawati, & Riani, 2021). Data from the International Diabetes Federation (IDF) in 2021 estimated that there were 536.6 million people with diabetes mellitus in 215 countries. It is estimated that by 2045, the number of diabetes mellitus patients will increase to 783.2 million (International Diabetes Federation, 2021). Indonesia ranks 5th in the world with 19.5 million diabetes mellitus patients in 2021 (Munir & Solissa, 2021). Data from the Basic Health Research of the Indonesian Ministry of Health, 2018, states that Central Java ranks 3rd out of 34 provinces. According to data from the Central Java Health Office, the number of diabetes mellitus patients in Central Java Province in 2021 was 618.546 people (Mufidah, 2021). The annual increase in the prevalence of diabetes mellitus is influenced by unhealthy lifestyles, diet, and physical activity patterns, as well as the inability to manage the disease independently. Poorly managed diabetes can lead to various complications. These complications can be minimized if patients are compliant, knowledgeable, and able to manage their

DOI: https://doi.org/10.33024/minh.v8i11.2150

disease through self-care (Ina, Hastutiningtyas, & Rosdiana, 2024).

Self-care provided to patients with diabetes mellitus is based on the principle of seven pillars, which are essential for controlling the disease and preventing complications. These seven pillars include a healthy diet, active movement, medication administration, monitoring, problem-solving, effective coping mechanisms, and risk reduction (Sugiharto & Hsu, 2020). The management of diabetes mellitus and the numerous treatments provided cause patients to experience changes or imbalances between biological, psychological, and social factors. These changes require self-empowerment and the ability to manage their condition. Self-empowerment in diabetes patients can be achieved by increasing knowledge, self- efficacy, and changes in self-care behaviors. Among these empowerments, self-efficacy plays a crucial role in behavioral change and influences the behavior of diabetes mellitus patients (Selano, 2023). Self-efficacy is an individual's belief in their ability to organize and perform specific tasks required to achieve desired outcomes (Pramudaningsih & Nur, 2023). Decreased self-efficacy in diabetes mellitus patients is a crucial factor in implementing self-care management. A lack of self-confidence in their illness and health results in patients not behaving in accordance with their health values. Therefore, patient self-confidence and motivation will influence self-care management adherence. When self-efficacy declines, it will impact, among other things, patient self-care management (Nurbayanti, Alamsyah, & Abdillah, 2023).

Self-care management is a form of self-care for individuals to manage or control diabetes. Self-efficacy in diabetes consists of the patient's ability to adhere to a balanced diet program to achieve good metabolic control, physical exercise through exercise, blood sugar control through regular blood sugar checks, pharmacological therapy, namely taking medication as prescribed, and foot care by cleaning and drying the feet after washing, trimming nails, wearing footwear, and checking their parts. This can be done to prevent further complications. The purpose of this study was to determine the relationship between *self-efficacy* and self-care management diabetes mellitus patients (Sundari, Asmoro, & Arifin, 2019).

RESEARCH METHOD

A correlational analytical design with a cross-sectional approach was employed. It examines the association between exposure or risk factors as independent variables and outcomes as dependent variables. Data on both variables were collected concurrently at a single point in time, allowing all independent and dependent variables to be observed simultaneously (Syapitri, Amila, & Aritonang, 2021). In this research, self-efficacy was defined as the independent variable, while self-care management among patients with diabetes mellitus served as the dependent variable. The primary objective of the study was to determine the relationship between self-efficacy and self-care management in individuals with diabetes mellitus.

The study population comprised all patients with diabetes mellitus who met the established inclusion criteria. Respondents were selected using a purposive sampling technique. Data collection instruments included the Diabetes Management Self-Efficacy Scale (DMSES), adapted from Sistyo (2020), which consists of 20 positively worded items scored on a scale of 0–10. Self-care management was assessed using the Summary of Diabetes Self-Care Activities (SDSCA) questionnaire adapted from Hidayah (2019). This instrument contains 17 items covering dietary management, physical activity, blood glucose monitoring, medication adherence, and foot care, with responses scored from 0 to 7 based on the number of days within a one-week period. The SDSCA includes both positively and negatively worded items.

Ethical approval for this study was obtained from the institutional ethics committee (approval number B/481/400.14.5.4/2025). Univariate analysis was conducted to describe respondents' demographic characteristics, including sex, educational level, and occupation, which were analyzed using frequency distributions for nominal and ordinal data. Variables measured on a ratio scale—such as age, duration of diabetes mellitus, self-efficacy, and self-care management—were analyzed using descriptive statistics, including mean, median, standard deviation, minimum, and maximum values. Bivariate analysis was performed to assess the relationship between self-efficacy and self-care management in patients with diabetes mellitus, using the Pearson correlation test.

Trina Kurniawati, Eka Budiarto*, Nur Intan Kusuma

Fakultas Ilmu Kesehatan, Universitas Muhammadiyah Pekajangan Pekalongan
Corresponding author: *E-mail: ekabudiarto4321@gmail.com

DOI: https://doi.org/10.33024/minh.v8i11.2150

RESEARCH RESULTS

Table 1. Characteristics of the Respondents (N=36)

Variable	Results
Age (Mean±SD)(Range)(Year)	(42.0±7.0)(28-55)
Duration of DM (Mean±SD)(Range)(Year)	(5.1±2.4)(2-12)
Gender (n/%)	
Male	10/27.8
Female	26/72.2
Education (n/%)	
No formal education	1/3.0
Elementary school	8/22.0
Junior high school	13/36.0
High school	10/28.0
University	4/11.0
Employment (n/%)	
Unemployed	23/63.0
Employed	13/37.0

Respondents were patients with diabetes mellitus, mostly women (72.2%). The average age of respondents was 42 years. The youngest was 28. The most common educational level was junior high school graduates (36%), and 63% of respondents were unemployed. The average duration of diabetes was 5.01 years, with the longest duration of diabetes for 12 years.

Table 2. Correlation Test of Self-Efficacy on Self-Management of Diabetes Mellitus Patients

Correlations			
Self-efficacy	Pearson Correlation	**Self-efficacy**	**Self Management**
	Sig. (2-tailed)	1	.407 *
			.014
Self Management	Pearson Correlation	.407 *	1
	Sig. (2-tailed)	.014	

The analysis revealed a statistically significant association between self-efficacy and self-management among patients with diabetes mellitus, as indicated by a p-value of 0.014.

DISCUSSION

Self-efficacy is an individual's belief in their ability to organize and perform specific tasks required to achieve desired outcomes (Deni & Ismonah, 2022). Decreased self-efficacy in diabetes mellitus patients is a crucial factor in implementing self-care management. A lack of self-confidence in their illness and health results in patients not behaving in accordance with their health values. Therefore, patient self-confidence and motivation will influence self-care management adherence. When self-efficacy *declines*, it will impact, among other things, patient self-care management (Utami, 2023).

Trina Kurniawati, Eka Budiarto*, Nur Intan Kusuma

Fakultas Ilmu Kesehatan, Universitas Muhammadiyah Pekajangan Pekalongan
Corresponding author: *E-mail: ekabudiarto4321@gmail.com

DOI: https://doi.org/10.33024/minh.v8i11.2150

Patients with type 2 diabetes mellitus need to practice self-management to improve their quality of life (Tjokroprawiro, 2015). Self-management in patients with type 2 diabetes mellitus includes aspects of self-integrity, self-regulation, interaction with healthcare professionals, blood sugar monitoring, and adherence to therapy or medication. Research on self-management in patients with type 2 diabetes mellitus at the Dinoyo Community Health Center in Malang can provide valuable insights into the challenges and strategies used by patients in coping with this chronic condition (Hastutiningtyas, Rosdiana, & Ina, 2024). This could also aid in the development of better interventions to support effective diabetes management at the community level.

Self-management in type II diabetes mellitus (DM) patients is a person's behavior for self-control and prevention, carried out by the patient themselves in managing type II diabetes, which includes control measures, complication prevention, and treatment (Kusnanto, Sundari, Asmoro, & Arifin, 2019). Aspects of self-management in type II diabetes mellitus patients that must be controlled include diet, physical activity, blood sugar management, and health care. Dieting is carried out by regulating eating patterns. In this diet, dietary regulation is carried out by paying attention to the type of food, the amount of food, and meal times. Physical activity involves movement, such as walking, cycling, jogging, and swimming (Firdaus & Kurniawan, 2020). Self-management of blood sugar levels serves as early detection and prevention of complications in people with type II diabetes. Blood sugar management involves self-monitoring blood sugar levels and adherence to medication. Medication adherence aims to control hyperglycemia in people with type II diabetes. Healthcare is provided through the use of healthcare facilities for ongoing care, treatment, and therapy (Simanjuntak, Sinaga, Pardede, & Parapat, 2021).

Lack of self-management can negatively impact the quality of life of type 2 diabetes patients (Chusniyawati & Kurniawati, 2024). Furthermore, lack of self-management can impact patients' attitudes and behaviors in maintaining a healthy lifestyle, including controlling sugar consumption and exercising to regulate blood sugar levels (Neesa & Muhlisin, 2021). Self-management plays a crucial role in controlling blood sugar levels to prevent further symptoms and complications (Lubis, Aminah, Pangestuty, Atika, Sembiring, & Aidha, 2023). Self-management for type 2 diabetes sufferers includes daily blood sugar control, taking medication as recommended by a doctor, following a diabetes-specific diet, and engaging in physical activity to prevent complications (Simanullang, Lim, & Eyanoer, 2020). The benefit of self-management is that it helps type 2 diabetes patients manage their health optimally and take responsibility for their own well-being. Consistency in implementing self-management is crucial for type 2 diabetes patients (Alobaidi, Alsamarai, & Salih, 2020).

CONCLUSION

The findings underscore the critical role of self-efficacy in the self-management of patients with diabetes mellitus, highlighting the necessity of interventions aimed at strengthening patients' confidence in their ability to manage the disease. Effective self-management is closely associated with improvements in patients' health status and overall disease outcomes. Conversely, low self-efficacy may lead to inadequate health-related behaviors, as patients who lack confidence in managing their condition are less likely to act in accordance with recommended health practices, including those required for optimal diabetes management.

REFERENCES

Alobaidi, A. H., Alsamarai, A. M., & Salih, A. A. (2020). Obesity as a Risk Factor for Disease Development of Asthma and Allergic Rhinitis. *International Medical Journal*, *27*(4), 409-411.

Chusniyawati, I. A., & Kurniawati, T. (2024). Hubungan Index Massa Tubuh (IMT) Dengan Kadar Gula Darah Pada Pasien Diabetes Melitus Di Wilayah Puskesmas Wiradesa Kabupaten Pekalongan.

Deni, I., & Ismonah, I. (2022). Hubungan self efficacy dengan self care management penderita diabetes mellitus tipe 2 di wilayah Binaan Puskesmas Karangayu. *Jurnal Perawat Indonesia*, *6*(3), 1234-1248.

Trina Kurniawati, Eka Budiarto*, Nur Intan Kusuma

Fakultas Ilmu Kesehatan, Universitas Muhammadiyah Pekajangan Pekalongan
Corresponding author: *E-mail: ekabudiarto4321@gmail.com

DOI: https://doi.org/10.33024/minh.v8i11.2150

Firdaus, N., & Kurniawan, T. (2020). Gambaran Self efficacy pada keluarga penderita Diabetes Melitus dalam menjalankan upaya pencegahan Diabetes Melitus. *Jurnal Ilmu Keperawatan Indonesia*, *1*(2).

Hastutiningtyas, W. R., Rosdiana, Y., & Ina, I. N. (2024). Manajemen Diri Pada Pasien Diabetes Melitus Tipe 2 Di Puskesmas Dinoyo Malang. *Care: Jurnal Ilmiah Ilmu Kesehatan*, *12*(1), 166-172.

Hidayah, M. (2019). Hubungan Perilaku Self-Management Dengan Kadar Gula Darah Pada Pasien Diabetes Mellitus Tipe 2 Di Wilayah Kerja Puskesmas Pucang Sewu, Surabaya. *Amerta nutrition*, *3*(3), 176.

Ina, I. N., Hastutiningtyas, W. R., & Rosdiana, Y. (2024). *Hubungan Manajemen Diri dengan Kualitas Hidup pada Pasien Diabetes Melitus Tipe 2 di Puskesmas Dinoyo Malang* (Doctoral dissertation, Fakultas Ilmu Kesehatan Universitas Tribhuwana Tunggadewi).

International Diabetes Federation. (2021). IDF Diabetes Atlas. Retrieved from: https://diabetesatlas.org/media/uploads/sites/3/2025/02/IDF_Atlas_10th_Edition_2021.pdf

Kusnanto, K., Sundari, P. M., Asmoro, C. P., & Arifin, H. (2019). Hubungan tingkat pengetahuan dan diabetes self-management dengan tingkat stres pasien diabetes melitus yang menjalani diet. *Jurnal Keperawatan Indonesia*, *22*(1), 31-42.

Lubis, S. A. M., 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), 2061-2066.

Lukitasari, D. R., Kristiyawati, S. P., & Riani, S. (2021). Hubungan Efikasi Diri dan Motivasi Diri dengan Self Care Management Pasien Diabetes Mellitus di Puskesmas Toroh II. In *Prosiding Seminar Nasional Unimus* (Vol. 4).

Mufidah, N. (2020). Hubungan Manajemen Diri Terhadap Tekanan Darah Pasien Hipertensi di Poli Rawat Jalan Rumah Sakit Anwar Medika Sidoarjo. *Repositori STIKES Rumah Sakit Anwar Medika*, 1-93. Diakses dari: https://www.scribd.com/document/811008570/Skripsi-Nurul-Mufidah

Munir, N. W., & Solissa, M. D. (2021). Hubungan Self-Efficacy dengan Self Care Pada Pasien Diabetes Mellitus. *Jurnal keperawatan widya gantari indonesia*, *5*(1).

Neesa, H. S., & Muhlisin, A. (2021). *Hubungan Self-Management Dengan Kualitas Hidup Penderita Hipertensi Di Wilayah Kerja Puskesmas Baki Sukoharjo* (Doctoral dissertation, Universitas Muhammadiyah Surakarta).

Nurbayanti, M. S., Alamsyah, M. S., & Abdillah, H. (2023). Hubungan Self Efficacy dan Self Management dengan Kualitas Hidup Pasien Diabetes Melitus Tipe II di Wilayah Kerja Puskesmas Lembursitu Kota Sukabumi. *Jurnal Ilmu Psikologi dan Kesehatan (SIKONTAN)*, *2*(2), 185-198.

Pramudaningsih, I. N., & Nur, H. A. (2023). Self Efficacy and Self Management of Type II Diabetes Mellitus Patient. *Menara Journal of Health Science*, *2*(4), 734-744.

Selano, M. (2023). Hubungan Lama Menderita dengan Self Management Pasien Diabetes Melitus. *Journal of Bionursing*, *5*(2), 150-156.

Simanjuntak, G. V., Sinaga, J., Pardede, J. A., & Parapat, M. (2021). Meningkatkan Self-Efficacy Kepatuhan Diet Pasien Diabetes Melitus Melalui Penyuluhan Kesehatan. *Jurnal Peduli Masyarakat*, *4*(2), 199-204.

Simanullang, R., Lim, H., & Eyanoer, P. (2020). Hubungan Kadar Glukosa Darah Puasa Dengan Kadar Asam Urat Pada Pasien Diabetes Melitus Tipe II. *Jurnal Kedokteran Methodist*, *13*(2), 73-77.

Trina Kurniawati, Eka Budiarto*, Nur Intan Kusuma

Fakultas Ilmu Kesehatan, Universitas Muhammadiyah Pekajangan Pekalongan
Corresponding author: *E-mail: ekabudiarto4321@gmail.com

DOI: https://doi.org/10.33024/minh.v8i11.2150

Sistyo, A. P. (2020). *Hubungan Self-Efficacy Dengan Self-Management Pada Pengidap Diabetes Melitus Tipe 2* (Doctoral dissertation, Unika Soegijapranata Semarang).

Sugiharto, S., & Hsu, Y. Y. (2020). The Diabetes Self-Care Calendar for people with type 2 diabetes mellitus in rural Indonesia: a pilot study. *Journal of Research in Nursing*, *25*(6-7), 594-601.

Sundari, P. M., Asmoro, C. P., & Arifin, H. (2019). Hubungan tingkat pengetahuan dan diabetes self-management dengan tingkat stres pasien diabetes melitus yang menjalani diet. *Jurnal Keperawatan Indonesia*, *22*(1), 31-42.

Syapitri, H., Amila, A., & Aritonang, J. (2021). *Buku ajar metodologi penelitian kesehatan*. Ahlimedia Book.

Tjokroprawiro, A. (2015). *Buku ajar ilmu penyakit dalam. Ed. 2: Fakultas Kedokteran Universitas Airlangga Rumah Sakit Pendidikan Dr. Soetomo Surabaya*. Airlangga University Press.

Utami, M. H. (2023). Hubungan Antara Efikasi Diri dengan Kadar Gula Darah Penderita Diabetes Melitus Tipe 2 di Wilayah Kerja Puskesmas Trauma Center Kota Samarinda.

Trina Kurniawati, Eka Budiarto*, Nur Intan Kusuma

Fakultas Ilmu Kesehatan, Universitas Muhammadiyah Pekajangan Pekalongan
Corresponding author: *E-mail: ekabudiarto4321@gmail.com

DOI: https://doi.org/10.33024/minh.v8i11.2150