



MEDICATION ADHERENCE AND BLOOD GLUCOSE CONTROL IN PATIENTS WITH TYPE 2 DIABETES MELLITUS: A LITERATURE REVIEW

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ABSTRACT

Managing type 2 diabetes mellitus involves long-term treatment and regular monitoring to keep blood glucose levels under control. Consistent use of prescribed medication is one aspect that may be related to the achievement of glycemic targets. However, the findings reported in earlier studies have not shown a completely uniform pattern. This review aimed to examine the available evidence concerning the association between patients' adherence to antidiabetic medication and their glycemic control. Relevant publications were identified through searches conducted in Google Scholar, PubMed, ScienceDirect, and Scopus. The literature search focused on the terms "type 2 diabetes mellitus," "medication adherence," and "glycemic control." The identification, screening, and selection of studies followed the PRISMA framework. After applying the predetermined eligibility criteria, A total of 12 articles published between 2020 and 2025 were retained for analysis from 14,467 records initially identified. Evidence from most of the selected studies demonstrated a statistically significant association between adherence to medication and glycemic outcomes. Across these studies, patients who took their prescribed medication more consistently tended to have better blood glucose or HbA1c results than those with less consistent adherence. The reviewed evidence suggests that maintaining medication adherence is associated with better glycemic control in individuals with type 2 diabetes mellitus. Supporting adherence can involve several approaches, including strengthening patients' understanding of treatment, increasing support from family members, and providing continued assistance from healthcare professionals.

Keywords: glycemic control; medication adherence; type 2 diabetes mellitus

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INTRODUCTION

Diabetes mellitus is a metabolic disorder in which the concentration of glucose in the blood rises above the normal range. The condition is broadly divided into four categories, namely type 1 diabetes mellitus, type 2 diabetes mellitus, gestational diabetes mellitus, and diabetes mellitus associated with other specific causes. Its occurrence is related to both inherited susceptibility and environmental influences (Hardianto, 2021). A range of clinical symptoms can occur in individuals with diabetes mellitus, including excessive thirst (polydipsia), increased appetite (polyphagia), frequent urination (polyuria), the presence of glucose in urine (glycosuria), dehydration, fatigue, unintended weight loss, visual problems, muscle cramps, constipation, and Candida infections. Several laboratory parameters can be used to establish a diabetes mellitus diagnosis, including fasting plasma glucose, plasma glucose measured two hours following an oral glucose tolerance test, glycated hemoglobin (HbA1c), and random blood glucose measurements (Hardianto, 2021).

Poorly controlled blood glucose may place patients with diabetes mellitus at risk of various serious complications. Reported complications include hyperglycemia, diabetic ketoacidosis, hypoglycemic coma, renal failure, blindness, sensory impairment, myocardial infarction or reduced cardiac function, stroke, and gangrenous wounds (Putra, 2022; Guo, 2020). For this reason, blood glucose evaluation forms an important component of diabetes mellitus care and should be conducted regularly in line with established recommendations. The results of glucose assessments provide

information about the patient's glycemic condition and can be used to guide appropriate and timely management aimed at minimizing the risk of complications (Carolus Borromeus Mulyatno, 2022, as cited in Qodir et al., 2024).

Glycemic management is not limited to monitoring blood glucose, as dietary regulation also represents an important component of diabetes mellitus care. Appropriate dietary management involves maintaining a suitable proportion of carbohydrates, protein, and fat while increasing fiber intake. For patients with diabetes mellitus, dietary planning includes adjusting food portions to individual energy requirements and maintaining an appropriate balance of nutrients. Consequently, dietary therapy needs to take account of each patient's nutritional requirements to support effective blood glucose management (Qodir et al., 2024). Medication adherence among individuals with type 2 diabetes mellitus may also be influenced by several factors, including age, educational background, occupation, gender, motivation, family support, and support from healthcare providers (Della et al., 2023).

Diabetes is recognized by the World Health Organization (WHO) as a noncommunicable disease with a growing global burden. The number of people living with diabetes increased from approximately 200 million in 1990 to about 830 million in 2022. Over the same period, the proportion of adults affected by diabetes doubled from 7% to 14%. The continued increase in diabetes cases emphasizes the importance of effective long-term disease management, including efforts to promote medication adherence as part of maintaining adequate glycemic control (WHO, 2024).

Medication adherence is an important component of diabetes management because it may influence the achievement of blood glucose targets. Several studies conducted in Indonesia have examined the relationship between medication adherence and glycemic control, although their findings have not been entirely consistent. Ariani et al. (2022), in a study of 153 outpatients with diabetes mellitus at RSUD Brigjend. H. Hasan Basry Kandangan, reported that 55.6% of participants had moderate medication adherence, while 64.7% had uncontrolled blood glucose levels. These findings highlight the challenges of maintaining medication adherence and achieving glycemic control in routine clinical practice.

Other studies have reported a statistically significant association between medication adherence and blood glucose outcomes. Mpila et al. (2024) found a significant relationship between medication adherence and the achievement of blood glucose targets among patients with type 2 diabetes mellitus at Klinik Imanuel Manado ($p = 0.017$). Similarly, Ramadhani and Hati (2024) reported a strong correlation between medication adherence and fasting blood glucose levels among patients with diabetes mellitus at a primary healthcare center in Batang Regency, with a correlation coefficient of 0.766. Putri et al. (2025) also found a significant relationship between medication adherence and fasting blood glucose levels among patients with diabetes mellitus at Puskesmas Kertapati, Palembang ($p < 0.05$). Collectively, these findings suggest that medication-taking behavior is an important factor to consider when evaluating glycemic outcomes.

However, not all studies have demonstrated a significant relationship. Wathani et al. (2024) examined oral hypoglycemic medication adherence and body mass index in relation to blood glucose levels among patients with type 2 diabetes mellitus in the working area of Minggir Health Center. Their findings showed no statistically significant relationship between medication adherence and blood glucose levels ($p = 0.776$). This result differs from the findings reported by Mpila et al. (2024), Ramadhani and Hati (2024), and Putri et al. (2025). The differences between these findings indicate that the relationship between medication adherence and glycemic control may vary across study populations and healthcare settings.

The variation in previous research findings provides a basis for synthesizing the available evidence. Examining the findings together may help describe the reported relationship between medication adherence and glycemic control in patients with type 2 diabetes mellitus. Accordingly, this literature review was conducted to synthesize findings from previous studies and describe the association between medication adherence and glycemic control among individuals with type 2 diabetes mellitus.

METHOD

The literature review focused on synthesizing available research findings concerning the association between medication adherence and glycemic control in individuals with type 2 diabetes mellitus. The identification of relevant publications was carried out using four electronic databases: Google Scholar, PubMed, ScienceDirect, and Scopus. The search strategy employed the terms “type 2 diabetes mellitus,” “medication adherence,” and “glycemic control.” Eligibility was limited to original studies published from 2020 to 2025, employing a cross-sectional research design and providing accessible full-text articles in either Indonesian or English. Publications were not considered when their content fell outside the scope of the review or when the reported outcomes did not address the variables of interest. Study screening and selection were conducted according to the PRISMA framework. Following the application of the predetermined eligibility criteria, 12 studies were retained for the final review.

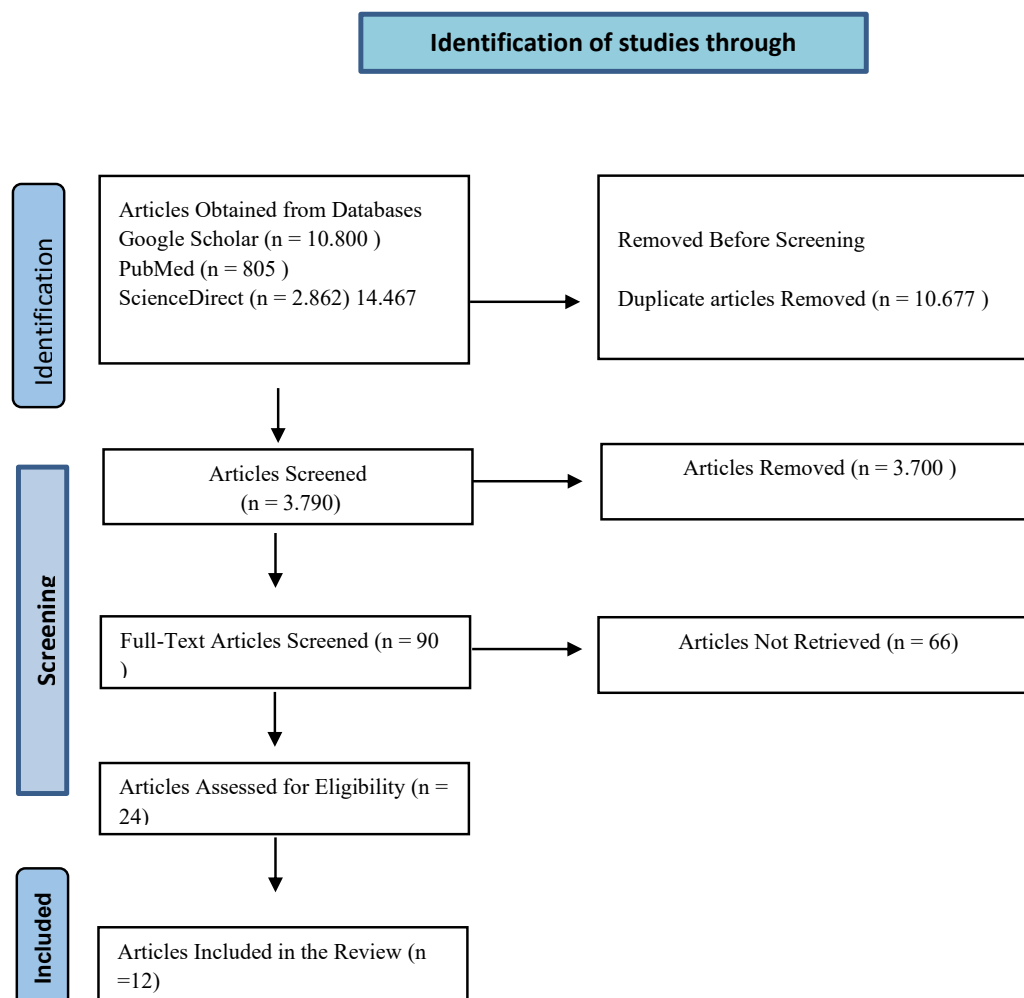


Figure 1. PRISMA Flowchart

RESULT

A total of 14,467 records were identified through the database search. The initial pool of records was subsequently reduced by removing 10,677 duplicate entries, resulting in 3,790 unique records available for further consideration. These records underwent title and/or abstract screening, during which 3,700 records were eliminated. The screening process consequently resulted in 90 records being carried forward for full-text evaluation. However, full-text access was not obtained for 66 of these records. The remaining 24 articles were then examined against the predetermined eligibility requirements. This assessment resulted in the exclusion of a further 12 articles because they failed to satisfy the inclusion requirements or did not sufficiently address the objectives of the review. Ultimately, 12 eligible studies remained and constituted the evidence included in this literature review.

Table 1.
Analysis Article

No	Authors and Publication	Title	Study Design	Population and Sample	Result	Conclusion
1	(Chusun, Husni Sanjaya Mira, 2025)	The Relationship Between Education and Medication Adherence and Its Effect on Random Blood Glucose Levels in Patients with Type 2 Diabetes Mellitus in the Inpatient Ward of Hospital X, Jakarta	Cross sectional	134 Patients	The study found that most participants were aged 56–65 years, female, unemployed, and had a primary school education. More than half had lived with diabetes mellitus for over five years. Low medication adherence and uncontrolled random blood glucose were observed in 64.9% and 62.7% of participants, respectively. Healthcare education was reported as good in 91% of cases. Statistical analysis showed significant associations between healthcare education and medication adherence and between medication adherence and random blood glucose levels ($p=0.000$).	The findings indicate that the level of education is associated with medication adherence among patients.
2	(Saibi et al., 2020)	Medication Adherence Among Patients with Type 2 Diabetes Mellitus at a Community Health Center in East Jakarta	Cross sectional	175 respondents with type 2 diabetes mellitus.	The study found that 71 respondents (40.6%) demonstrated moderate adherence to antidiabetic medication, with boredom being the most common reason for non-adherence (43.6%). A significant association was also identified between medication adherence and blood glucose test results.	To further investigate the relationship between adherence levels and blood glucose test results, further research is needed on the relationship between blood glucose test results and adherence using a prospective research design.
3	(Rosalinda & Nugraheni, 2023)	Factors Affecting Medication Adherence Among Patients with Type 2 Diabetes Mellitus at Kotagede II Community Health	Cross Sectional	106 respondent	The study included 106 respondents, of whom 79 (74.5%) were classified as having moderate medication adherence. Among patients with type 2 diabetes mellitus receiving care at Kotagede II	Among the variables assessed, blood glucose level showed the strongest association with medication

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		Center, Jakarta			Community Health Center in Yogyakarta, both blood glucose levels and knowledge were significantly associated with medication adherence. Blood glucose levels showed a significant association ($p=0.000$; $OR=12.387$), while knowledge was also significantly related to adherence ($p=0.012$).	adherence among patients with type 2 diabetes mellitus at Kotagede II Community Health Center in Yogyakarta.
4	(Sa'dyah et al., 2021)	Medication Adherence and Glycemic Control Index in Patients with Type 2 Diabetes Mellitus at Sultan Agung Islamic Hospital, Semarang	Cross sectional	96 patient	Among patients with type 2 diabetes mellitus at Sultan Agung Islamic Hospital, Semarang, medication adherence was significantly associated with glycemic control based on HbA1c levels ($p=0.000$; $p<0.05$).	Medication adherence was significantly associated with glycemic control, as measured by HbA1c levels, among patients with type 2 diabetes mellitus.
5	(Wahyuni et al., 2024)	Analysis of Oral Medication Adherence in Patients with Type 2 Diabetes Mellitus Based on the Theory of Planned Behavior in Makassar City, South Sulawesi Province, Indonesia	Cross sectional	321 patient	Oral medication adherence was significantly associated with attitude, support, and perceived behavioral control among patients with type 2 diabetes mellitus. Support showed the greatest contribution (172.099), followed by attitude (59.413) and perceived behavioral control (45.000).	The study indicated that oral medication adherence was related to patients' attitudes, social support, and perceived behavioral control, with support identified as the most influential factor among the variables examined.
6	(Apsari & Sartika, 2024)	The Relationship Between Perceived Barriers and Medication Adherence Among Patients with Diabetes Mellitus at Pasar Minggu Community Health Center, South Jakarta	Cross sectional	129 respondents	Of the 129 respondents, 74 (57.4%) were classified as non-adherent to their medication regimen. In terms of participant characteristics, 68 respondents (52.7%) were younger than 56 years, 95 (73.6%) were female, and 98 (76%) were unemployed. A low educational level was reported in 73 respondents (56.6%), while 96 (74.4%) had been living with diabetes mellitus for more than one year. Most respondents demonstrated good knowledge of diabetes mellitus (68; 52.7%) and a positive individual attitude (103; 79.8%). Meanwhile, 98 respondents (76%) had a negative perception of benefits, 94 (72.9%) had a negative perception of	Medication adherence among patients with diabetes mellitus was classified as poor. Statistical analysis also demonstrated an association between medication adherence and perceived barriers, with $p=0.077$ ($p<0.1$).

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					barriers, 66 (51.2%) reported low self-efficacy, and 82 (63.6%) had low family support. Statistical analysis identified a significant association between medication adherence and perceived barriers ($p=0.077$; $p<0.1$), whereas the other variables examined were not significantly associated with medication adherence.	
7	(Muzhaffarah et al., 2024)	The Relationship Between Family Support and Blood Glucose Control Among Patients with Diabetes Mellitus (DM)	Cross sectional	144 respondents	Using a 95% confidence level with α set at 0.05, the statistical test produced a p-value of 0.000, indicating that the observed result met the established criterion for statistical significance.	Family support was found to be associated with adherence to blood glucose control among patients with diabetes mellitus at Telagasari Community Health Center, Karawang Regency, in 2023.
8	(Della et al., 2023)	Factors Associated with Medication Adherence Among Patients with Type 2 Diabetes Mellitus	Cross sectional	60 respondents	The analysis showed that medication adherence was significantly related to age ($p=0.036$), gender ($p=0.045$), occupation ($p=0.014$), self-motivation ($p=0.000$), family support ($p=0.002$), and support from healthcare providers ($p=0.028$). However, no significant association was observed between educational level and medication adherence ($p=0.673$).	Several characteristics were found to be related to medication adherence among patients with type 2 diabetes mellitus receiving treatment at Panti Rini Hospital. These included patients' age, gender, occupation, level of self-motivation, family support, and support provided by healthcare professionals. Educational level, however, did not demonstrate a significant relationship with adherence to medication.
9	(Qodir et al., 2024)	Dietary Adherence and Blood Glucose Levels in Patients with Type 2 Diabetes Mellitus	Cross sectional	100 respondent	Dietary adherence was distributed almost evenly across the three categories: 33 respondents (33%) had low adherence, 33 (33%) had moderate adherence, and 34 (34%) demonstrated high adherence. The corresponding mean blood glucose levels were 275.85 mg/dL, 168.67 mg/dL, and 106.82 mg/dL, respectively.	The study demonstrated that dietary adherence was significantly related to blood glucose levels across the patient groups with type 2 diabetes mellitus receiving care at Dinoyo Community Health Center.

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					Statistical testing using the Kruskal-Wallis test demonstrated a significant relationship between dietary adherence and blood glucose levels among patients with type 2 diabetes mellitus at Dinoyo Community Health Center ($p=0.000$; $p<0.05$), indicating differences between at least two adherence groups.	
10	(Syatriani et al., 2023)	Factors Associated with Medication Adherence Among Patients with Type 2 Diabetes Mellitus at Tamamaung Community Health Center	Cross sectional	78 respondents	Medication adherence did not show a statistically significant relationship with knowledge ($p=0.112$), age ($p=0.486$), or occupation ($p=0.946$). However, significant relationships were observed for disease duration ($p=0.004$) and family support ($p=0.012$), indicating that these two factors were associated with medication adherence.	The study findings indicated that medication adherence was associated with disease duration and family support, whereas knowledge, age, and occupation were not associated with adherence. These findings are expected to encourage patients to improve their understanding of diabetes mellitus and recognize the importance of taking medications regularly.
11	(Olickal et al., 2021)	Medication adherence and glycemic control status among people with diabetes seeking care from a tertiary care teaching hospital, south India	Cross sectional	1,002 patients with type 2 diabetes mellitus.	A total of 1,002 persons with disabilities (PWDs) participated in the study. The sample was predominantly male (approximately 62%) and from rural areas (81%). Nearly 69% had been undergoing diabetes treatment for more than five years, and 49% were receiving insulin therapy. Based on the MGL score (≥ 1), poor medication adherence was observed in 39% of participants (95% CI: 36.5–42.6%), while inadequate fasting blood sugar (FBS) control was reported in 58% (95% CI: 55.1–61.4%). The prevalence of poor medication adherence was higher among female participants (APR=1.44, $p<0.001$), daily laborers	The study showed that 39% of participants were non-adherent to their medication regimen, while inadequate fasting blood sugar control was observed in more than half of the persons with disabilities.

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					(APR=1.70, $p=0.009$), and smokers (APR=1.46, $p=0.001$). In addition, unsatisfactory FBS control was associated with age above 45 years, female gender (APR=1.18, $p=0.012$), insulin use (APR=1.17, $p=0.004$), alcohol consumption (APR=1.14, $p=0.019$), and poor medication adherence (APR=1.20, $p<0.001$).	
12	(Eze et al., 2022)	Drug therapy and medication adherence in type 2 diabetes in a care facility	Cross sectional	200 adult patients	The study comprised 200 respondents, most of whom were over 60 years of age (141; 70.5%). Oral antidiabetic therapy was reported in 187 participants (93.5%), with metformin being used by 199 respondents (99.5%) and pioglitazone by 100 (50.0%); no use of dipeptidyl peptidase-4 inhibitors was reported. Poor glycemic control was identified in 159 participants (79.5%), and 152 (76.0%) did not perform self-monitoring of blood glucose. Overall, moderate medication adherence was the most frequently observed adherence category. Neither the type of medication nor sociodemographic characteristics demonstrated a significant relationship with medication adherence ($p>0.05$). In contrast, self-monitoring of blood glucose showed a significant association with medication adherence ($p=0.001$).	The study showed that metformin and pioglitazone were among the oral antidiabetic treatments commonly used by the patients. Despite this treatment, poor glycemic control remained prevalent, while moderate medication adherence was the most commonly observed level. Medication adherence was significantly related to patients' practice of self-monitoring blood glucose. These findings emphasize the importance of continued diabetes education as part of efforts to strengthen medication adherence.

DISCUSSION

The findings obtained from the 12 studies included in this review indicate that medication adherence is associated with glycemic outcomes in patients with type 2 diabetes mellitus. A common pattern across the evidence was that patients who maintained their prescribed medication routines tended to have more favorable blood glucose or HbA1c measurements than patients whose adherence was less consistent (Sa'dyah et al., 2021; Saibi et al., 2020; Chusun et al., 2025; Olickal et al., 2021). Medication adherence reflects the extent to which patients follow the prescribed dosage, timing, and instructions for treatment. Maintaining the prescribed medication regimen is therefore an important component of diabetes management.

The individual findings provide further detail about this association. Sa'dyah et al. (2021) reported a statistically significant relationship between medication adherence and HbA1c control among patients with type 2 diabetes mellitus at Sultan Agung Islamic Hospital, Semarang ($p < 0.05$). Similar findings were reported by Hasanah et al. (2024), who identified a significant relationship between adherence to oral antidiabetic medication and fasting blood glucose levels among patients at Ulin General Hospital, Banjarmasin ($p = 0.002$). These findings support the importance of medication adherence in glycemic management. However, because the studies used different clinical settings and measurement approaches, their findings should be interpreted in the context of their respective populations.

The relationship between medication adherence and glycemic control is also influenced by other aspects of diabetes self-management. Aulia et al. (2022) found that adherence to antidiabetic medication was significantly associated with HbA1c levels in patients with type 2 diabetes mellitus ($p < 0.05$). Their study also identified significant associations between carbohydrate intake, fat intake, and HbA1c levels, whereas protein intake was not significantly associated with HbA1c. The multivariable analysis further indicated that carbohydrate intake, fat intake, medication adherence, and body mass index were simultaneously associated with HbA1c levels. These findings suggest that glycemic control should not be assessed solely in terms of medication-taking behavior. Dietary practices and nutritional status are also relevant considerations when evaluating diabetes management.

Further evidence regarding comprehensive diabetes management was provided by Duri et al. (2024), who investigated adherence to the four pillars of diabetes management among patients with type 2 diabetes mellitus at Zahra Medika Clinic in Silo, Jember. The intervention incorporated medication adherence, dietary management, exercise, and health education. The study reported differences in blood glucose and HbA1c outcomes following the intervention, supporting the relevance of a comprehensive approach to diabetes management. However, because the intervention included several components, the observed outcomes cannot be attributed exclusively to medication adherence. Instead, the findings emphasize the importance of integrating medication use with other self-management practices.

The importance of these additional behavioral factors was also demonstrated by Laili et al. (2025). In their study involving 93 respondents, medication adherence was significantly associated with random blood glucose levels ($p = 0.016$). Significant relationships were also found for physical activity ($p = 0.034$), carbohydrate consumption frequency ($p = 0.039$), and fiber consumption frequency ($p = 0.028$). These findings indicate that medication adherence forms part of a broader pattern of diabetes self-management. Patients' glycemic outcomes may therefore be related to several behaviors that should be considered together when developing diabetes management strategies.

In addition to individual behavior, education and support may contribute to better diabetes self-management. Susanti et al. (2023) examined an education and support group intervention based on self-care theory among patients with type 2 diabetes mellitus. The intervention addressed adherence to diet, medication, and physical activity, as well as independence in foot care and blood glucose management. The study reported improvements in self-management outcomes following the intervention. These findings suggest that structured education and group support may help patients maintain their treatment routines and improve their ability to manage diabetes. Nevertheless, because the intervention addressed multiple aspects of self-care, its findings should not be interpreted as evidence of the isolated effect of medication adherence on glycemic control.

The findings should also be interpreted in light of differences between the included studies. The studies varied in participant characteristics, sample sizes, medication-adherence instruments, and

indicators of glycemic control. HbA1c, fasting blood glucose, and random blood glucose were not measured uniformly across all studies. Furthermore, some studies focused specifically on medication adherence, whereas others examined adherence alongside dietary practices, physical activity, education, and nutritional status. These methodological differences may partly explain variations in the reported findings. The cross-sectional studies included in the original review can demonstrate associations between variables but cannot establish whether medication adherence directly causes changes in glycemic control. Evidence from intervention studies provides additional insight into comprehensive diabetes management, although multicomponent interventions cannot necessarily establish the independent contribution of medication adherence.

Taken together, the findings indicate that medication adherence is an important component of glycemic management in patients with type 2 diabetes mellitus. Evidence from Sa'dyah et al. (2021) and Aulia et al. (2022) supports an association between medication adherence and HbA1c outcomes, while Hasanah et al. (2024) reported a significant relationship between medication adherence and fasting blood glucose. The findings of Laili et al. (2025) further demonstrate that medication adherence is associated with glycemic outcomes alongside other behavioral factors. Meanwhile, Duri et al. (2024) and Susanti et al. (2023) highlight the relevance of comprehensive self-management, health education, and support. Therefore, strategies to improve diabetes management should encourage adherence to prescribed medication while also considering dietary practices, physical activity, patient education, and ongoing support from healthcare professionals.

CONCLUSION

Taken together, the evidence reviewed in this study points to a relationship between patients' adherence to diabetes medication and the achievement of glycemic control in type 2 diabetes mellitus. A recurring finding across the selected literature was that patients who followed their medication regimen more consistently tended to present with more favorable glucose or HbA1c measurements. Adherence was also linked in the reviewed studies to a range of patient-related and support-related factors, such as age, treatment motivation, knowledge, family involvement, assistance from healthcare providers, and the length of time living with diabetes.

REFERENCES

- Apsari, N., & Sartika, R. A. D. (2024). Hubungan persepsi hambatan dengan kepatuhan minum obat pada pasien diabetes melitus di Puskesmas Pasar Minggu Jakarta Selatan. *Media Publikasi Promosi Kesehatan Indonesia (The Indonesian Journal of Health Promotion)*, 7(5), 1281–1293. <https://doi.org/10.56338/mppki.v7i5.5114>
- Ariani, N., Alfian, R., & Prihandiwati, E. (2022). Tingkat perilaku pengobatan, kepatuhan minum obat, dan kadar gula darah pasien diabetes mellitus rawat jalan di RSUD Brigjend. H. Hasan Basry Kandangan. *Jurnal Ilmiah Manuntung: Sains Farmasi dan Kesehatan*, 8(1), 156–162. <https://doi.org/10.51352/jim.v8i1.523>
- Aulia, R., Wahyuningsih, M. S. H., & Huriyati, E. (2022). Asupan zat gizi makro dan kepatuhan minum obat antidiabetik terhadap kadar HbA1c pada penyandang diabetes melitus tipe 2. *Jurnal Gizi Klinik Indonesia*, 19(2), 79–87. <https://doi.org/10.22146/ijcn.70259>
- Chusun, Husni Sanjaya Mira, C. L. E. (2025). Hubungan pendidikan terhadap tingkat kepatuhan minum obat dan pengaruhnya pada kadar gula darah sewaktu pasien diabetes melitus tipe II di ruang inap Rumah Sakit X Jakarta. *Jurnal*, 7(1), 118–135. <https://doi.org/10.33759/jrki.v7i1.675>
- Della, A., Subiyanto, P., & Maria, A. (2023). Faktor-faktor yang berhubungan dengan kepatuhan pengobatan diabetes melitus tipe II. *Jurnal Keperawatan Klinis dan Komunitas (Clinical and Community Nursing Journal)*, 7(2), 124–136. <https://doi.org/10.22146/jkkk.83090>
- Duri, V. R. S., Ellina, A. D., & Nurwijayanti. (2024). Efektifitas kepatuhan pelaksanaan empat pilar diabetes militus terhadap kadar gula darah dan kadar HbA1C penderita diabetes militus tipe 2

- (studi di Klinik Zahra Medika Silo Jember). *Jurnal Keperawatan Suaka Insan*, 6(1). <https://ejournal.unklab.ac.id/index.php/kjn>
- Eze, U. I. H., Akhumi, T. F., Iheanacho, C. O., & Saka, S. A. (2022). Drug therapy and medication adherence in type 2 diabetes in a care facility: A cross-sectional survey. *Exploratory Research in Clinical and Social Pharmacy*, 8, 100200. <https://doi.org/10.1016/j.rcsop.2022.100200>
- Hardianto, D. (2021). Telaah komprehensif diabetes melitus: Klasifikasi, gejala, diagnosis, pencegahan, dan pengobatan. *Jurnal Bioteknologi & Biosains Indonesia (JBBI)*, 7(2), 304–317. <https://doi.org/10.29122/jbbi.v7i2.4209>
- Hasanah, U., Kurniawati, D., Mustaqimah, & Yuwindry, I. (2024). Hubungan kepatuhan pasien diabetes dalam mengonsumsi obat antidiabetes oral terhadap kadar gula darah puasa di RSUD Ulin Banjarmasin. *Jurnal Sains Medis*, 10(2). <https://doi.org/10.33084/jsm.v10i2.7725>
- Laili, N. F., Probosiwi, N., Dianati, S., Vitria, L., & Hidayah, L. (2025). Analisis hubungan faktor perilaku pengendalian pasien diabetes mellitus dengan kadar gula darah di Puskesmas Sukorame Kediri. *Jurnal Inovasi Farmasi Indonesia*, 6(2), 119–129. <https://doi.org/10.30737/jafi.v6i2.6526>
- Mpila, D. A., Wiyono, W. I., & Lolo, W. A. (2024). Hubungan tingkat kepatuhan minum obat dengan kadar gula darah dan kualitas hidup pasien diabetes melitus tipe 2 di Klinik Imanuel Manado. *Medical Scope Journal*, 6(1), 116–123. <https://doi.org/10.35790/msj.v6i1.51696>
- Muzhaffarah, S. F., Simamora, R. S., & Roulita. (2024). Hubungan dukungan keluarga dengan kepatuhan kontrol gula darah pada penderita diabetes mellitus (DM). *Jurnal Penelitian Perawat Profesional*, 6(4), 1539–1548. <https://doi.org/10.37287/jppp.v6i4.2717>
- Olickal, J. J., Chinnakali, P., Suryanarayana, B. S., Saya, G. K., Ganapathy, K., & Subrahmanyam, D. K. S. (2021). Medication adherence and glycemic control status among people with diabetes seeking care from a tertiary care teaching hospital, South India. *Clinical Epidemiology and Global Health*, 11, 100742. <https://doi.org/10.1016/j.cegh.2021.100742>
- Putri, A. U., Rosadi, E., & Arif, A. (2025). Hubungan tingkat kepatuhan minum obat dengan kadar gula darah puasa pasien diabetes melitus. *Jurnal Kesehatan Terapan*, 12(1), 10–16. <https://doi.org/10.54816/jk.v12i1.873>
- Qodir, A., Rahmawati, M., & Wulandari, A. T. (2024). Kepatuhan diet dan kadar gula darah pada pasien diabetes melitus tipe 2: Studi cross-sectional. *Jurnal Kesehatan Tambusai*, 5(3), 9530–9538. <https://doi.org/10.31004/jkt.v5i3.33406>
- Ramadhani, A. F., & Hati, A. K. (2024). Hubungan tingkat pengetahuan, kepatuhan minum obat, dan kadar gula darah puasa pasien diabetes melitus di Puskesmas X Kabupaten Batang. *Indonesian Journal of Pharmacy and Natural Product*, 7(1), 54–61. <https://doi.org/10.35473/ijpnp.v7i01.2282>
- Rosalinda, J., & Nugraheni, A. Y. (2023). Faktor yang mempengaruhi tingkat kepatuhan pengobatan pasien hipertensi di Puskesmas Kotagede II Yogyakarta. *Jurnal Ilmiah Farmasi*, 15(2), 1–16. <https://myjurnal.poltekkes-kdi.ac.id/index.php/hijp/article/view/1323>
- Sa'dyah, N. A. C., Sabiti, F. B., & Susilo, S. T. (2021). Kepatuhan pengobatan terhadap indeks glikemik kontrol pada pasien diabetes melitus tipe II di Rumah Sakit Islam Sultan Agung Semarang. *Journal of Pharmaceutical Science and Clinical Research*, 6(3), 287–294. <https://doi.org/10.20961/jpscr.v6i3.51930>
- Saibi, Y., Romadhon, R., & Nasir, N. M. (2020). Kepatuhan terhadap pengobatan pasien diabetes melitus tipe 2 di Puskesmas Jakarta Timur. *Jurnal Farmasi Galenika (Galenika Journal of Pharmacy) (e-Journal)*, 6(1), 94–103. <https://doi.org/10.22487/j24428744.2020.v6.i1.15002>
- Susanti, N., Nursalam, & Nadatien, I. (2023). Pengaruh education and support group berbasis teori self care terhadap kepatuhan, kemandirian perawatan kaki dan kadar glukosa darah pada pasien diabetes melitus tipe 2. *Jurnal Keperawatan Suaka Insan*, 8(1), 21–29. <https://doi.org/10.51143/jksi.v8i1.413>
- Syatriani, S., Amaliah, A. R., & Marwanti. (2023). Faktor yang berhubungan dengan kepatuhan minum obat penderita diabetes melitus tipe II di Puskesmas Tamamaung. *Jurnal Promotif Preventif*, 6(3), 394–402. <https://doi.org/10.47650/jpp.v6i3.822>

- Wahyuni, A., Rasyid, F. A., & Hasnaeni, H. (2024). Analisis kepatuhan minum obat oral pada diabetes mellitus tipe 2 berdasarkan teori planned behaviour di Kota Makassar Provinsi Sulawesi Selatan, Indonesia. *Jurnal Sains dan Kesehatan (J. Sains. Kes)*, 6(5), 666–672. <https://doi.org/10.25026/jsk.v6i5.2315>
- Wathani, I. H. N., Purba, M. B., & Helmyati, S. (2024). Kepatuhan minum obat hipoglikemik oral dan indeks massa tubuh terhadap kadar gula darah pada pasien diabetes melitus tipe 2. *Jurnal Gizi Klinik Indonesia*, 20(2), 78–86. <https://doi.org/10.22146/ijcn.91474>
- World Health Organization. (2024). Diabetes. World Health Organization. <https://www.who.int/news-room/fact-sheets/detail/diabetes>