Indonesian Journal of Global Health Research
Volume 8 Number 6, December 2026
e-ISSN 2715-1972; p-ISSN 2714-9749
http://jurnal.globalhealthsciencegroup.com/index.php/IJGHR

THE ROLE OF FAMILY SELF-EFFICACY AND CAREGIVER READINESS IN ADHERENCE TO ANTIHYPERTENSIVE MEDICATION AMONG OLDER ADULTS WITH HYPERTENSION: A SYSTEMATIC REVIEW

Maria do Rosario de Fatima Pinto*, Priyanto
Faculty of Nursing, Universitas Ngudi Waluyo, Jl. Diponegoro No.186, Ngablak, Gedanganak, Ungaran Timur, Ungaran, Kab. Semarang, Jawa Tengah 50512, Indonesia
*mdorojario@gmail.com

ABSTRACT
Hypertension is a chronic condition requiring long-term therapy and medication adherence. Among older adults, adherence may be affected by physical limitations, regimen complexity, cognitive changes, medication beliefs, and family support. Family self-efficacy and caregiver readiness may therefore play important roles in maintaining antihypertensive medication adherence. This systematic review aimed to identify and synthesize evidence regarding the role of family self-efficacy and caregiver readiness in antihypertensive medication adherence among older adults with hypertension. A systematic review with narrative synthesis was conducted using articles retrieved from PubMed (n = 13), Scopus (n = 12), Google Scholar (n = 50), and ScienceDirect (n = 3). Studies published between [year] and [year] addressing hypertension, older adults, medication adherence, family and caregiver factors, and patient-family partnership were considered. Randomized controlled trials, observational studies, systematic reviews, and meta-analyses were included. Of 78 identified articles, 7 met the inclusion criteria and were included in the final synthesis. Family-based and self-management interventions improved medication adherence, self-efficacy, caregiver knowledge and behaviors, and blood pressure control. Observational evidence also demonstrated associations between self-efficacy, social support, and medication adherence. However, evidence directly examining caregiver readiness as a distinct construct remains limited. Family self-efficacy can strengthen caregivers' capacity to support medication adherence. Caregiver readiness may be a multidimensional construct encompassing knowledge, skills, self-efficacy, emotional readiness, communication abilities, and collaboration with patients.

Keywords: antihypertensive medication; caregiver readiness; family self-efficacy; family support; hypertension; medication adherence; older adults

How to cite (in APA style)
Pinto, M. do R. de F., & Priyanto, P. (2026). The Role of Family Self-Efficacy and Caregiver Readiness in Adherence to Antihypertensive Medication among Older Adults with Hypertension: A Systematic Review. *Indonesian Journal of Global Health Research*, *8*(6), 165–174. https://doi.org/10.37287/ijghr.v8i6.2650.

INTRODUCTION

Hypertension is one of the chronic diseases that requires long-term management and adherence to pharmacological therapy. Successful blood pressure control is determined not only by the selection of appropriate medications but also by the patient's ability to consistently maintain medication-taking behaviors. Among older adults, these challenges may become more complex due to changes in physical and cognitive function, the use of multiple medications, limited mobility, and an increased need for family support (Van Truong et al., 2021).

Adherence to antihypertensive medication is an essential component of hypertension management because non-adherence can hinder the achievement of adequate blood pressure control. Among older adults, factors such as forgetfulness, complex medication regimens, beliefs about medications, adverse effects, and social support may influence their ability to maintain long-term treatment. Therefore, approaches to medication adherence should consider not only individual factors but also family and social environmental factors (Wu et al., 2024).

Family members play a strategic role in helping older adults adhere to their medication regimens. Family support may include providing medication reminders, assisting with obtaining medications,

monitoring medication intake, providing emotional support, facilitating communication with healthcare professionals, and creating an environment that promotes healthy behaviors. A synthesis of the role of family caregivers indicates that caregivers can contribute to medication adherence through supervision, education, motivation, emotional support, and assistance in accessing healthcare services (Is-mail & Nortey, 2026).

In addition to family support, the psychological aspect of self-efficacy plays an important role in medication-taking behavior. Self-efficacy refers to an individual's belief in their ability to perform a specific behavior and maintain it when faced with obstacles. Among patients with hypertension or diabetes, lower self-efficacy has been associated with poorer medication adherence, indicating that confidence in one's ability to manage the disease is an important factor to consider in interventions aimed at improving medication adherence (Wu et al., 2024).

Among older adults with comorbid hypertension and type 2 diabetes, treatment adherence-related self-efficacy is also associated with psychosocial and behavioral factors, including medication beliefs, communication with physicians, medication-specific social support, and adherence behaviors. These findings indicate that self-efficacy does not function independently but is influenced by the social environment and patients' experiences in managing their treatment (Pierobon et al., 2023).

Within the family context, self-efficacy is relevant not only to patients but also to caregivers. Family caregiver self-efficacy refers to caregivers' confidence in their ability to perform caregiving tasks. Caregivers with greater self-efficacy may be better able to provide medication reminders, monitor medication use, assist with medication management, provide emotional support, and maintain involvement in chronic disease management (Susanto et al., 2024).

Experimental evidence from Susanto et al. demonstrated that a 24-week Family Self-management Program improved medication adherence, caregiver knowledge, caregiver self-efficacy, and caregiver behavior among families and patients with hypertension. These findings support the concept that enhancing caregivers' capabilities and confidence may be an important component of family-based hypertension management strategies (Susanto et al., 2024).

Other evidence indicates that a patient-family carer partnership approach can improve blood pressure control and self-care. Interventions involving patients and caregivers as care partners position the family not merely as passive providers of support but as active partners in hypertension management (Zeng et al., 2024).

A concept closely related to caregiver self-efficacy is caregiver readiness. Caregiver readiness can be understood as the readiness in terms of knowledge, skills, emotional preparedness, and behavioral capacity to perform caregiving roles. In the context of hypertension, such readiness may include the ability to understand the disease and medication regimen, recognize barriers to adherence, provide medication reminders, monitor medication use, communicate with healthcare professionals, and provide support without compromising the older adult's autonomy (Is-mail & Nortey, 2026; Susanto et al., 2024).

Although evidence regarding family support, caregiver involvement, self-efficacy, and family self-management is increasingly developing, studies specifically examining caregiver readiness as a distinct construct in antihypertensive medication adherence among older adults remain limited. Most studies have employed related constructs; therefore, synthesis is needed to understand how caregiver knowledge, self-efficacy, skills, and involvement may shape caregiving readiness and subsequently influence medication adherence (Is-mail & Nortey, 2026; Zeng et al., 2024).

Based on these considerations, this systematic review was conducted to integrate evidence regarding the role of family self-efficacy and caregiver readiness in antihypertensive medication adherence among older adults with hypertension. This focus is expected to provide a conceptual basis for developing family-based nursing interventions that not only improve knowledge but also strengthen caregivers' confidence and readiness to perform their caregiving roles. This systematic review aimed to identify the relationship between family self-efficacy and antihypertensive medication adherence among older adults, identify the role of caregivers in supporting treatment adherence, identify the components of caregiver readiness, synthesize the effectiveness of family-based interventions, and identify research gaps related to the measurement of caregiver readiness.

METHOD

Study Design

This study employed a systematic review design with narrative synthesis to identify, evaluate, and synthesize evidence regarding the role of family self-efficacy and caregiver readiness in improving antihypertensive medication adherence among older adults with hypertension. The reporting of the systematic review followed the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) 2020 guidelines to ensure that the processes of study identification, selection, quality assessment, and reporting were conducted systematically and transparently.

The research question was formulated using a modified PICO/PICOS framework. The **Population (P)** comprised older adults with hypertension who were receiving antihypertensive therapy. **Intervention/Exposure (I/E)** included *family self-efficacy*, *caregiver self-efficacy*, *caregiver readiness*, *family support*, *family involvement*, *family self-management*, and *patient-family partnership*. **Comparison (C)** included *usual care*, *standard care*, or lower levels of family/caregiver involvement. The primary **Outcome (O)** was antihypertensive medication adherence, while secondary outcomes included *self-care*, *self-management*, and blood pressure control.

Literature Search

A comprehensive literature search was conducted using several electronic databases, namely PubMed/MEDLINE, Scopus, CINAHL, ScienceDirect, Web of Science, and Google Scholar. Google Scholar was used as an additional source to identify potentially relevant articles that were not indexed in the major bibliographic databases.

The literature search aimed to identify studies evaluating the relationship between or effects of family- and caregiver-related factors on medication adherence among older adults with hypertension. The literature was limited to articles published between 2020 and 2026, allowing the evidence to encompass relevant previous research as well as recent developments in family and caregiver involvement in hypertension management.

Search Strategy

The search strategy was developed using a combination of keywords and the Boolean operators **AND** and **OR**. The keywords were organized around four main concepts: hypertension, older adults, family/caregiver involvement, and medication adherence.

The primary search strategy was:
("Hypertension" OR "high blood pressure") AND ("older adults" OR elderly OR aged OR "older people") AND ("family self-efficacy" OR "caregiver self-efficacy" OR "caregiver readiness" OR "family support" OR "family involvement" OR "family participation" OR "family self-management" OR "patient-family partnership") AND ("medication adherence" OR "medication compliance" OR "antihypertensive adherence" OR "medication-taking behavior")

An additional search strategy was used to identify studies specifically addressing caregiver readiness and self-efficacy:
("Hypertension") AND ("older adults" OR elderly) AND ("caregiver readiness" OR "caregiver preparedness" OR "caregiver competence" OR "caregiver self-efficacy") AND ("medication adherence" OR "antihypertensive medication")

The search syntax was adapted to the characteristics and indexing systems of each database without altering the core concepts of the search strategy.

Study Selection
A total of 78 articles were initially identified from four electronic databases: PubMed (n = 13), Scopus (n = 12), Google Scholar (n = 53), and ScienceDirect (n = 3). All identified records were compiled and screened for duplicate records before further assessment.

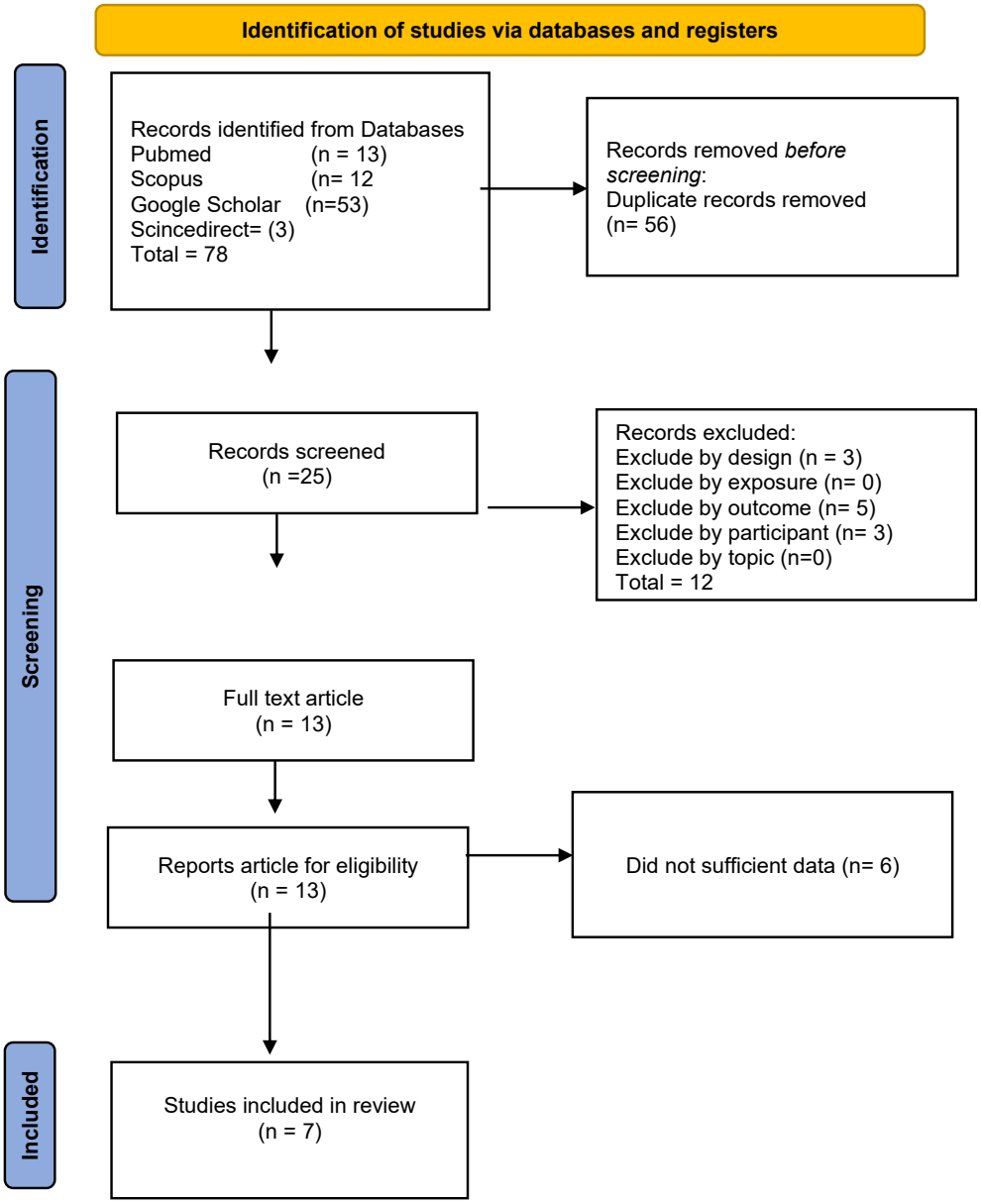
Following the initial selection process, 25 articles were screened based on their titles and abstracts. During this stage, 12 articles were excluded because they did not meet the predetermined inclusion criteria, including inappropriate study design (n = 3), irrelevant exposure (n = 0), inappropriate outcome (n = 5), inappropriate participants (n = 3), and irrelevant topic (n = 0).

Subsequently, 13 full-text articles were assessed for eligibility based on the relevance of the population, family/caregiver-related factors, medication adherence outcomes, study design, and the availability of methodological information. During the eligibility assessment, 6 articles were excluded because they did not provide sufficient data for the review.

Finally, 7 articles met all inclusion criteria and were included in the systematic review. The study selection process followed the PRISMA 2020 guidelines and comprised four main stages: identification, screening, eligibility, and inclusion, as presented in Picture 1.

Data Extraction
Data were extracted using a standardized data extraction form. The extracted information included author(s), year of publication, country of study, study design, sample size and characteristics, participants' age, hypertension characteristics, type of family/caregiver involvement, components of family or caregiver self-efficacy, forms of caregiver readiness, intervention characteristics when applicable, intervention duration, medication adherence measurement instruments, instruments measuring self-efficacy or family support, primary and secondary outcomes, main study findings, and study limitations.

Data extraction specifically focused on identifying the mechanisms through which family or caregiver involvement contributed to improved medication adherence. The aspects assessed included caregivers' ability to provide medication reminders, monitor medication use, provide emotional and instrumental support, provide medication-related education, communicate with patients, and assist patients in maintaining long-term hypertension management.



Picture 1. Prisma

RESULT

Study Characteristics

The reviewed evidence indicates that the relationships among family involvement, self-efficacy, caregivers, and medication adherence have been investigated through randomized controlled trials, observational studies, systematic reviews, and meta-analyses. The main studies included in the synthesis were those conducted by Susanto et al. (2024), Wu et al. (2024), Pierobon et al. (2023), Van Truong et al. (2021), Zeng et al. (2024), Is-mail and Nortey (2026), and Menga and Djaha (2025).

Table 1.
Analisys Article

Author	Design	Population/Sample	Focus	Outcome	Result
Susanto et al. (2024)	RCT	Patients with hypertension and caregivers	Family self-management	BP, MMAS-8, caregiver outcomes	Improved medication adherence, caregiver knowledge, self-efficacy, and behavior.
Wu et al. (2024)	Cross-sectional	622 individuals ≥45 years	Patient, family, and community factors	Medication adherence	Self-efficacy was associated with medication adherence.
Pierobon et al. (2023)	Observational	180 patients ≥65 years with hypertension and type 2 diabetes	Psychosocial correlates	Self-efficacy/adherence	Social support, medication beliefs, communication, and adherence were associated with self-efficacy.
Van Truong et al. (2021)	Meta-analysis	12 RCTs	Self-management	BP, self-efficacy, adherence	Self-management improved self-efficacy and adherence and reduced blood pressure.
Zeng et al. (2024)	RCT	110 family dyads	Patient-family partnership	BP, self-care	The intervention improved blood pressure control and self-care.
Is-mail & Nortey (2026)	Systematic review	13 studies	Family caregiver role	Medication adherence	Caregivers contributed through monitoring, education, motivation, emotional support, and healthcare navigation.
Menga & Djaha (2025)	Observational	Older adults with hypertension	Self-efficacy	Medication adherence	Self-efficacy was associated with medication adherence.

Self-Efficacy and Medication Adherence

Self-efficacy emerged as a psychological factor consistently associated with medication adherence. Wu et al. (2024) demonstrated that participants with lower self-efficacy were more likely to experience suboptimal medication adherence. This finding suggests that confidence in one's ability to manage the disease may influence the ability to maintain medication-taking behaviors.

A meta-analysis by Van Truong et al. (2021) involving 12 randomized controlled trials demonstrated that self-management programs improved self-efficacy and medication adherence and also contributed to reductions in blood pressure. These findings support the importance of interventions aimed at strengthening patients' capabilities and confidence in managing chronic diseases.

Family Self-Efficacy and Caregivers

Susanto et al. (2024) demonstrated that the Family Self-management Program improved caregiver knowledge, caregiver self-efficacy, caregiver behavior, and medication adherence. These findings indicate that caregivers can be considered targets of intervention rather than merely accompanying patients. Conceptually, increased caregiver knowledge may strengthen self-efficacy and subsequently enhance readiness to perform caregiving behaviors. Thus, family self-efficacy may represent one of the mechanisms linking family-based interventions to patients' medication adherence (Susanto et al., 2024).

Role of Family Support and Involvement

Family involvement may reinforce medication-taking routines through reminders, supervision, emotional support, and practical assistance. The synthesis by Is-mail and Nortey (2026) indicates that caregivers contribute through these mechanisms, suggesting that the family can serve as an important resource for maintaining medication adherence.

Caregiver Readiness

Based on the synthesis, caregiver readiness can be conceptualized as a multidimensional construct comprising **knowledge readiness, self-efficacy readiness, skill readiness, emotional readiness, behavioral readiness, communication readiness, and partnership readiness**. These components are interrelated in determining caregivers' ability to perform their roles consistently (Is-mail & Nortey, 2026; Susanto et al., 2024).

Patient-Family Partnership

Zeng et al. (2024) demonstrated that a patient-family carer partnership can improve blood pressure control and self-care. The partnership approach positions patients and caregivers as partners in decision-making and care implementation, allowing family support to be provided without compromising patient autonomy.

DISCUSSION

The findings of this systematic review indicate that family self-efficacy, caregiver involvement, and family support play important roles in medication adherence among older adults with hypertension. Although the constructs used across studies varied, a consistent pattern emerged whereby family capabilities, confidence, and involvement can facilitate hypertension management. Family self-management and self-management programs generally demonstrated improvements in self-efficacy and medication adherence, suggesting that strengthening family capabilities is a promising approach (Susanto et al., 2024; Van Truong et al., 2021). This finding is further supported by evidence indicating that self-efficacy and social support are important factors associated with medication adherence among older adults with hypertension (Ruksakulpiwat et al., 2024; Sukma et al., 2023).

The findings regarding self-efficacy can be explained from the perspective of Social Cognitive Theory. Self-efficacy influences behavioral choices, effort, persistence, and an individual's ability to cope with challenges. In the context of caregiving, confidence in one's ability to provide care may determine the extent to which caregivers are able to maintain monitoring and support when treatment must be continued over the long term (Wu et al., 2024; Susanto et al., 2024). Recent evidence among older adults with hypertension has also demonstrated an association between family support, self-efficacy, and adherence to antihypertensive medication (Amalia et al., 2025).

Caregivers should not be positioned merely as providers of medication reminders. Their roles include monitoring, education, motivation, emotional support, assistance in obtaining medications, and communication with healthcare professionals. The synthesis of evidence on family caregivers indicates that these functions are important mechanisms that can support medication adherence, particularly when older adults experience difficulties in managing their treatment (Is-mail &

Nortey, 2026). Recent qualitative evidence also demonstrates that medication management can represent a complex responsibility for family caregivers, requiring coordination with healthcare services, management of medication-related information, and responses to problems arising during treatment (Kiiski et al., 2025).

The relationship between family self-efficacy and caregiver readiness can be understood through the conceptual sequence knowledge → self-efficacy → readiness → caregiver behavior → patient adherence. Knowledge provides a cognitive foundation but does not necessarily lead to behavior. Self-efficacy is needed to strengthen caregivers' confidence in performing caregiving tasks, whereas readiness reflects the preparedness to translate knowledge and confidence into caregiving actions (Susanto et al., 2024; Is-mail & Nortey, 2026). This relationship is consistent with evidence showing that interventions targeting knowledge and active participation may improve both medication adherence and self-efficacy among older adults with hypertension (Yu et al., 2026).

Patient-family partnership is also an important component because caregiver support should preserve the autonomy of older adults. Zeng et al. (2024) demonstrated that a partnership approach can improve blood pressure control and self-care. This finding suggests that family interventions should emphasize collaboration rather than replacing the patient's role in decision-making. Evidence from family participation interventions among older adults with hypertension further indicates that involving family caregivers in the planning and implementation of hypertension management may facilitate improvements in antihypertensive medication adherence (Perngmark et al., 2022).

The available evidence also reveals an important research gap. Most studies have assessed family support, family self-management, caregiver self-efficacy, or caregiver involvement, whereas caregiver readiness is rarely assessed as a primary construct. Consequently, there is currently no strong consensus regarding the operational definition or measurement instrument for caregiver readiness specifically in relation to antihypertensive medication adherence among older adults (Is-mail & Nortey, 2026; Zeng et al., 2024). Future studies should therefore clarify the dimensions of caregiver readiness and develop valid instruments capable of assessing caregivers' preparedness to support long-term medication management.

The implications for nursing practice include the need for more systematic caregiver assessment. Nurses can assess caregivers' knowledge, self-efficacy, skills, emotional readiness, communication abilities, and capacity to perform monitoring. Interventions can then be directed toward strengthening self-efficacy through education, demonstration, return demonstration, problem-solving, feedback, and regular follow-up (Susanto et al., 2024; Van Truong et al., 2021). In addition, interventions combining social support with structured strategies to facilitate medication management may improve adherence and blood pressure outcomes (Ferdinand et al., 2023).

Overall, the evidence indicates that medication adherence among older adults with hypertension is not solely an individual behavioral issue but is also a process influenced by patient-family relationships and caregiver capacity. Developing interventions specifically designed to enhance caregiver readiness may strengthen the sustainability of hypertension management at home. Future interventions should therefore consider caregivers as active partners and provide structured support to strengthen their capacity, confidence, communication, and ability to manage medication-related challenges (Wu et al., 2024; Zeng et al., 2024; Kiiski et al., 2025).

CONCLUSION

Family self-efficacy and caregiver involvement play important roles in supporting antihypertensive medication adherence among older adults with hypertension. Family-based self-management interventions may improve medication adherence, self-efficacy, caregiver knowledge and behavior,

self-care, and blood pressure control. Caregiver readiness is a multidimensional factor encompassing knowledge, skills, self-efficacy, emotional and behavioral readiness, communication, and partnership. Strengthening family self-efficacy and caregiver readiness through a patient-family partnership approach may enhance consistent support for medication adherence and contribute to improved hypertension management among older adults.

REFERENCES

Amalia, L., Ahmad, G., & Dewi Amir, M. (2025). The relationship between family support and self efficacy in adherence to taking medication in elderly patients with hypertension. Jurnal Health Society, 14(1), 45–52. https://doi.org/10.62094/jhs.v14i1.197

Ferdinand, D. P., Reddy, T. K., Wegener, M. R., Guduri, P. S., Lefante, J. J., Nedunchezhian, S., & Ferdinand, K. C. (2023). TEXT MY BP MEDS NOLA: A pilot study of text-messaging and social support to increase hypertension medication adherence. American Heart Journal Plus: Cardiology Research and Practice, 26, 100253. https://doi.org/10.1016/j.ahjo.2023.100253

Is-mail, M., & Nortey, R. T. (2026). Family caregivers' role in hypertensive medication adherence: A systematic review and synthesis of evidence. International Journal for Multidisciplinary Research, 8(1).

Kiiski, A., Luoma, E., Airaksinen, M., Pohjanoksa-Mäntylä, M., Desselle, S., & Kivelä, S.-L. (2025). Caregivers' challenges in engaging with the health system to optimise medication management of older care recipients: A qualitative study including home visits. BMJ Open, 15(6), e093122. https://doi.org/10.1136/bmjopen-2024-093122

Menga, M. K., & Djaha, Y. T. L. (2025). Self-efficacy with medication adherence in the elderly with hypertension. Journal Interdisciplinary Health, 1(2), 1–7. https://doi.org/10.61099/jih.v1i1.100

Perngmark, P., Doloh, N. I., & Holroyd, E. (2022). Family participation to promote medication adherence among Thai-Muslim older adults with hypertension: Action research study. Journal of Transcultural Nursing, 33(3), 381–387. https://doi.org/10.1177/10436596221077672

Pierobon, A., Zanatta, F., Granata, N., Nissanova, E., Polański, J., Tański, W., Callegari, G., Caporotondi, A., Ferretti, C., & Jankowska-Polańska, B. (2023). Psychosocial and behavioral correlates of self-efficacy in treatment adherence in older patients with comorbid hypertension and type 2 diabetes. Health Psychology Report, 11(3), 188–199. https://doi.org/10.5114/hpr/159284

Ruksakulpiwat, S., Schiltz, N. K., Irani, E., Josephson, R. A., Adams, J., & Still, C. H. (2024). Medication adherence of older adults with hypertension: A systematic review. Patient Preference and Adherence, 18, 957–975. https://doi.org/10.2147/PPA.S459678

Sukma, S., Tamtomo, D., & Demartoto, A. (2023). Effect of social support and self-efficacy on drug taking adherence in hypertensive patients: A meta-analysis. Journal of Epidemiology and Public Health, 8(1), 138–149. https://doi.org/10.26911/jepublichealth.2023.08.01.12

Susanto, T., Hernawati, S., Yunanto, R. A., Rahmawati, I., Laras Ati, N. A., & Fauziah, W. (2024). Family self-management program for hypertension management and sodium consumption adherence: A parallel randomized control trial among family caregivers and people with hypertension. Journal of Research in Health Sciences, 24(4), e00628. https://doi.org/10.34172/jrhs.2024.163

Van Truong, P., Wulan Apriliyasari, R., Lin, M. Y., Chiu, H. Y., & Tsai, P. S. (2021). Effects of self-management programs on blood pressure, self-efficacy, medication adherence and body mass index in older adults with hypertension: Meta-analysis of randomized controlled trials. International Journal of Nursing Practice, 27(2), e12920. https://doi.org/10.1111/ijn.12920

Wu, Y., Xiong, S., Zhu, G., Chen, X., Zhang, M., Gong, E., Li, C., Jia, P., Østbye, T., & Yan, L. L. (2024). Patient, family, and community factors associated with medication adherence among people with hypertension or diabetes: A cross-sectional analysis. Exploratory Research in Clinical and Social Pharmacy, 15, 100482. https://doi.org/10.1016/j.rcsop.2024.100482

Yu, J., Shi, N., Zhao, J., Li, F., Wang, J., Jin, M., & Jin, H. (2026). Effectiveness of health literacy interventions for blood pressure control, medication adherence, and self-efficacy in older adults with hypertension: A systematic review and meta-analysis. Journal of Evaluation in Clinical Practice, 32(2), e70419. https://doi.org/10.1111/jep.70419

Zeng, D., Chien, W. T., & Yang, M. (2024). Effectiveness of a patient-family carer partnership intervention on blood pressure control for people with hypertension in rural communities: A randomised controlled trial. Journal of Nursing Management, 2024, 7033013. https://doi.org/10.1155/2024/7033013