J. Publ. Kes. Masy. Ind., 2026; 13(1): pp. 36-47.
P-ISSN: 2407-1625 | E-ISSN: 2581-0901
DOI: https://dx.doi.org/10.20527/jpkmi.v13i1.22872

Original Research Article

The Impact of Community Empowerment in Self-Management Education on Medication Adherence Among Hypertension Patients: A Systematic Review

Nunuk Windariyanti[1*], Dwi Sarwani Sri Rejeki[2], Siwi Pratama Mars Wijayanti[2]

[1] Master of Public Health, Department of Public Health, Faculty of Health Sciences, Jenderal Soedirman University, Dr. Soeparno Karangwangkal Street, Banyumas 53123, Indonesia
[2] Department of Public Health, Faculty of Health Sciences, Jenderal Soedirman University, Dr. Soeparno Karangwangkal Street, Banyumas 53123, Indonesia
*Corresponding Author, Email: nwindariyanti.03@gmail.com

ABSTRACT

Hypertension, a chronic disease, remains a leading cause of global illness and death. Medication adherence is critical for managing hypertension, yet poor adherence is common. This systematic review evaluated how community empowerment and self-management education influence medication adherence in adults with hypertension. Using Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines, the review identified studies published in English from 2015 to 2025 in Google Scholar, PubMed, and Scopus, focusing on adult hypertensive populations and reporting adherence outcomes. Studies without educational or empowerment interventions were excluded. Two reviewers independently selected and assessed the quality of studies. Of 443 articles, six met the criteria. Results showed that structured self-management education, especially with personalized support and follow-up, significantly improved medication adherence. Community empowerment strategies, including family involvement, peer support, and engagement with local health workers, further enhanced motivation and long-term adherence. These findings highlight the importance of integrating self-management and community-based interventions into hypertension care. Such approaches may strengthen public health programs, promote sustained treatment adherence, and reduce hypertension-related complications. The review's evidence supports prioritizing these strategies for better health outcomes. This review was not prospectively registered.

Keywords: Community Empowerment; Hypertension; Medical Adherence; Self-management Education

INTRODUCTION

Hypertension is a global public health issue with increasing prevalence and is recognized as a leading modifiable risk factor for cardiovascular disease and mortality worldwide. It affects all communities and socioeconomic strata and is recognized as a major modifiable risk factor for global mortality from all causes and cardiovascular diseases, and as the leading cause of lost Disability-Adjusted Life Years (DALYs) (Hamrahian et al., 2022). Hypertension, or high blood pressure, is a condition in which systolic blood pressure exceeds 140 mmHg and diastolic blood pressure exceeds 90 mmHg (Susanti et al., 2022). It is a key risk factor for neurological diseases and is strongly associated with all subtypes of stroke, including ischemic stroke, intracerebral hemorrhage, and subarachnoid hemorrhage. According to the 2023 Indonesian Health Survey, the prevalence of hypertension among individuals aged 18 years and older, based on direct measurements, was recorded at 30.8%. However, there remains a significant gap between those diagnosed with hypertension and those adhering to treatment

or follow-up visits to healthcare facilities. For instance, among individuals aged 18–59 years, only 2.53% of the 5.9% diagnosed with hypertension took medications regularly, and 2.34% had routine follow-up visits. In the ≥ 60 age group, out of the 22.9% diagnosed, only 11.9% regularly took medication and 11% engaged in follow-up visits (Kementrian Kesehatan Republik Indonesia, 2023). This pattern highlights that poor medication adherence remains a major barrier to effective hypertension management in Indonesia and globally (Burnier & Egan, 2019; Krousel-Wood et al., 2019)

Hypertension is often referred to as a "silent killer" because it usually presents no symptoms but, if left unmanaged, can lead to severe complications such as retinopathy, heart disease, hemorrhagic stroke, and even sudden death (Susanti et al., 2022). Individuals frequently seek treatment for hypertension only after the onset of symptoms or life-threatening complications. Effective hypertension control depends on sustained self-management practices, including lifestyle modifications, medication adherence, and support systems that promote patient self-efficacy (Delavar et al., 2020). Although previous studies have examined self-management interventions and medication adherence among hypertensive patients, there is limited evidence regarding the integration of community empowerment with educational approaches (Sakinah et al., 2024). This systematic review synthesizes current evidence on the combined effects of community empowerment and self-management education on medication adherence in individuals with hypertension.

There remains a research gap in understanding how community-driven and educational approaches collectively influence adherence outcomes in hypertensive patients, especially in low- and middle-income contexts (Himmelfarb & Commodore-Mensah, 2016; Jafar Gandhi & Jehan, 2017; Lee et al., 2018).

This systematic review aims to fill this gap by synthesizing current evidence on the effects of community empowerment and self-management education on medication adherence among patients with hypertension. Using the PICO framework, the review focuses on: Population, adults diagnosed with hypertension; Intervention, community empowerment and self-management education programs; Comparator, usual care or standard education interventions; and Outcome, levels of medication adherence and related behavioral improvements. This approach enables a comprehensive understanding of the effectiveness of educational and community-based interventions in promoting adherence and improving.

METHODS

Search Strategy

This study employed a Systematic Literature Review (SLR) approach guided by the PRISMA framework. The review process consisted of four main stages: identification, screening, eligibility, and inclusion. During the identification stage, a comprehensive search was conducted in Google Scholar, PubMed, and Scopus to capture studies published between January 2015 and March 2025. The search combined Medical Subject Headings (MeSH) and free-text terms using Boolean operators as follows: ("hypertension" OR "high blood pressure") AND ("self-care" OR "self-management" OR "patient education") AND ("community empowerment" OR "community engagement") AND ("medication adherence" OR "treatment adherence"). Filters were applied to include only peer-reviewed articles written in English, involving human subjects, and employing quantitative designs. The initial search yielded 443 records; 107 duplicates were removed, leaving 336 for screening (Figure 1).

J. Publ. Kes. Masy. Ind., 2026; 13(1): pp. 36-47.
P-ISSN: 2407-1625 | E-ISSN: 2581-0901
DOI: https://dx.doi.org/10.20527/jpkmi.v13i1.22872

Screening

In the screening phase, titles and abstracts were independently reviewed by two researchers to exclude studies that were not primary research such as systematic reviews, meta-analyses, scoping reviews, pilot studies that did not explicitly address hypertension. Any disagreements were resolved through discussion or consultation with a third reviewer. Based on these criteria, 206 records were excluded, and 130 articles were assessed for eligibility. Full-text screening was then conducted to evaluate alignment with the research focus, population, and methodology. A total of 110 studies were excluded for using qualitative methods, involving non-hypertensive populations, or lacking direct relevance to medication adherence. The final inclusion consisted of 6 studies that met all eligibility criteria and were deemed of sufficient methodological quality for synthesis (Figure 1).

The eligibility criteria included studies that involved adult participants (≥18 years) diagnosed with hypertension, applied quantitative methods, and implemented community empowerment or self-management education as the primary intervention. Eligible studies were required to include a comparator group receiving standard care or conventional education and to report measurable outcomes related to medication adherence. Studies were excluded if they used qualitative designs, focused on diseases other than hypertension, or were published in languages other than English.

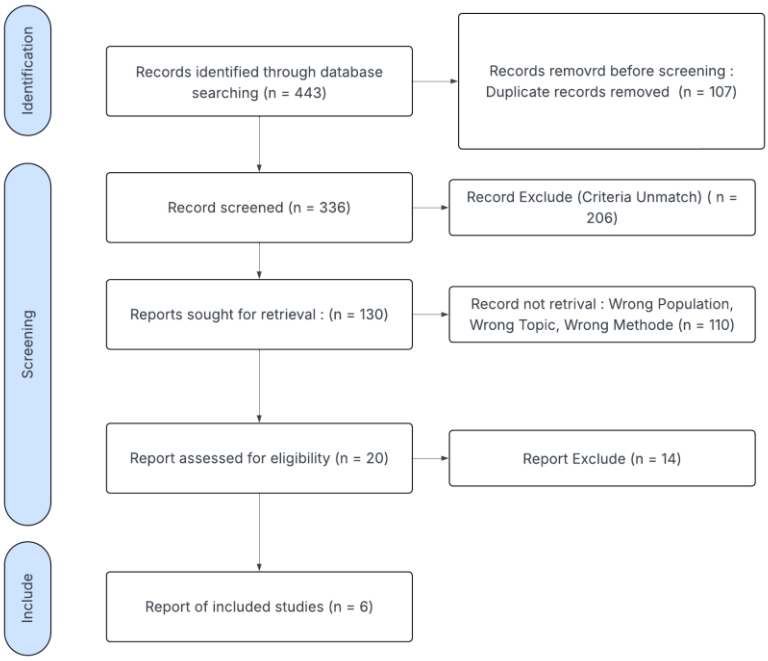

Figure 1. Flowchart of the Review Process

Quality Assessment

Methodological quality was assessed using the Joanna Briggs Institute (JBI) Critical Appraisal Checklist (Institute, 2020). Table 1 summarizes each study's JBI rating: Yes (Y), No (N), Unclear (U), or Not Applicable (NA). Studies were classified as high quality (7–8 Yes responses), moderate quality (4–6 Yes responses), or low quality (≤3 Yes responses). Only studies with moderate or high quality were included in the final synthesis.

J. Publ. Kes. Masy. Ind., 2026; 13(1): pp. 36-47.
P-ISSN: 2407-1625 | E-ISSN: 2581-0901
DOI: https://dx.doi.org/10.20527/jpkmi.v13i1.22872

JBI Criteria: Q1: Were the criteria for inclusion in the sample clearly defined? Q2: Were the study subjects and the setting described in detail? Q3: Was the exposure measured validly and reliably? Q4: Were objective, standard criteria used for measurement of the condition? Q5: Were confounding factors identified? Q6: Were strategies to deal with confounding factors stated? Q7: Were the outcomes measured validly and reliably? Q8: Was appropriate statistical analysis used?

Table 1. JBI Critical Appraisal Criteria for Included Studies

No	Criteria	Description
Q1	Inclusion criteria clearly defined	Whether the study clearly defined the criteria for including participants
Q2	Subjects and setting described in detail	Whether sufficient details about participants and study context were provided
Q3	Exposure measured validly and reliably	Whether the exposure was measured using valid and reliable methods
Q4	Objective, standard criteria used for condition measurement	Whether standardized tools or criteria were used to assess the condition
Q5	Confounding factors identified	Whether potential confounders were recognized
Q6	Strategies to deal with confounding factors stated	Whether methods to control confounders were described
Q7	Outcomes measured validly and reliably	Whether outcome measurements were accurate and consistent
Q8	Appropriate statistical analysis used	Whether suitable statistical methods were applied

Data Extraction

Data extraction was carried out independently by two reviewers using a standardized form developed for this review. The form was pilot-tested on two studies to ensure clarity, consistency, and accuracy. Extracted information included study characteristics (author, year, country, and design), participant details (age, sample size, and diagnostic criteria), intervention components (type, frequency, and duration), comparator characteristics, and adherence outcomes. Discrepancies during data extraction were discussed and resolved by consensus to ensure reliability and minimize bias.

Prior to data extraction, the review team defined key data items to ensure transparency and consistency. The variables collected from each study included bibliographic information, study and participant characteristics, intervention descriptions, comparators, and outcomes. The primary outcome of interest was medication adherence, defined as the extent to which hypertensive patients adhered to prescribed medication regimens, measured through validated tools or self-report scales. Secondary outcomes included changes in self-efficacy, knowledge, social support, and behavioral adherence to hypertension management. When information was incomplete or unclear, data were verified by cross-referencing relevant sections within the same article. If clarification could not be made, the data were recorded as “not reported” (NR) and excluded from comparative analysis but retained for narrative synthesis. This process ensured methodological rigor, transparency, and reproducibility throughout the review. Due to heterogeneity in study designs, populations, and adherence measurement tools, a meta-analysis was not conducted. Instead, findings were synthesized narratively according to thematic relevance.

J. Publ. Kes. Masy. Ind., 2026; 13(1): pp. 36-47.
P-ISSN: 2407-1625 | E-ISSN: 2581-0901
DOI: https://dx.doi.org/10.20527/jpkmi.v13i1.22872

RESULTS AND DISCUSSION

This systematic review critically examines the impact of community empowerment and self-management education on medication adherence among patients with hypertension. The analysis assesses the methodological quality of the included studies and synthesizes key characteristics, including study design, intervention approaches, and outcome measures. Findings are organized into thematic categories to investigate the influence of self-care education, patient self-management, and community-based support systems on adherence behaviors. Through a comparative and integrative approach, this review provides a comprehensive understanding of the effectiveness of educational and community empowerment strategies in improving medication adherence, while also identifying variations and limitations within the included studies.

Table 2. Critical Appraisal of Included Studies

Author (Year)	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Interpretation (Quality Category)
Abza et al. (2024)	Y	Y	Y	Y	Y	Y	Y	Y	High quality (8/8 criteria met)
Golshahi et al. (2015)	Y	Y	Y	Y	U	Y	Y	Y	Moderate quality (7/8 criteria met; confounding factors unclear)
Jariyasakulwong et al. (2025)	Y	Y	Y	Y	Y	Y	Y	Y	High quality (8/8 criteria met)
Heydari et al. (2025)	Y	Y	Y	Y	Y	Y	N	N	Moderate quality (6/8 criteria met)
Amadu et al. (2025)	Y	Y	Y	Y	Y	Y	Y	Y	High quality (8/8 criteria met)
Waris et al. (2025)	Y	Y	Y	Y	Y	Y	Y	Y	High quality (8/8 criteria met)

The JBI quality assessment in Table 2 indicated that most of the studies reviewed employed robust methodologies. Of the six articles, four (Abza et al. (2024), Jariyasakulwong et al. (2025), Amadu et al. (2025), and Waris et al. (2025)) were rated as high quality, meeting nearly all assessment criteria (8 out of 8). Consequently, their research design, variable measurement, and analysis were considered adequate and reliable.

The remaining two studies, Golshahi et al. (2015) and Heydari et al. (2025), were rated as moderate quality. Golshahi et al. lacked sufficient clarity regarding the control of confounding factors, whereas Heydari et al. did not meet several criteria, particularly those related to the validity of outcome measurements. Despite these limitations, both studies were

J. Publ. Kes. Masy. Ind., 2026; 13(1): pp. 36-47.
P-ISSN: 2407-1625 | E-ISSN: 2581-0901
DOI: https://dx.doi.org/10.20527/jpkmi.v13i1.22872

included in the synthesis as they satisfied most quality indicators. In summary, the evidence base for this systematic review is primarily composed of high-quality studies, thereby increasing confidence in the overall synthesis.

Table 3. Characteristics of Included Studies

Author (Year)	Study Design	Methodology	Technique	Key Findings	Data Analysis Methods
(Abza et al., 2024)	Cross-sectional	Survey using H-SCALE	Logistic regression	Social support and family size affect self-care adherence	Binary logistic regression
(Golshahi et al., 2015)	Randomized Controlled Trial	Self-care education intervention in four groups	ANOVA, paired t-test	Face-to-face education is more effective than pamphlets/ or Short Message Service (SMS) in reducing blood pressure.	ANOVA, paired t-test, Wilcoxon
(Jariyasakulwong et al., 2025)	Cross-sectional	Multilevel survey using structured questionnaires	Logistic regression, Pearson correlation	Social support and environmental conditions influence self-care practices	Descriptive, logistic regression, correlation
(Heydari et al., 2025)	Community Trial Protocol	Community-based PATCH empowerment intervention	Multivariate linear regression (planned)	The PATCH approach focuses on empowering communities for hypertension education	Linear regression (protocol-based)
(Amadu et al., 2025)	Cross-sectional	Survey on quality of life & medication adherence	SPSS, descriptive statistics, and associations	High adherence with poor quality of life, influenced by social factors	Descriptive statistics and correlation
(Waris et al., 2025)	Cross-sectional	Survey on knowledge & adherence	Chi-square, correlation, bivariate analysis	Low knowledge and poor adherence are linked to demographic and health system factors	SPSS, bivariate analysis, and correlation

According to the study characteristics on table 2, most studies utilized a cross-sectional survey design to investigate factors affecting self-care adherence, particularly among patients with chronic conditions such as hypertension. The primary analytical methods were logistic regression, correlation analysis, and descriptive statistics. Several experimental studies, including randomized controlled trials, found that face-to-face education was more effective than text-message-based interventions. The evidence consistently shows that social support, environmental factors, knowledge, demographics, and healthcare system characteristics significantly influence self-care adherence. Community-based strategies, such as the PATCH model, may strengthen community empowerment in health education, while individuals with a lower quality of life generally demonstrate poorer adherence. Overall, these findings highlight the necessity of comprehensive educational programs and strong social support systems to enhance patient self-care.

Based on the synthesis of the six included studies, two major thematic findings were identified: (1) the role of self-care education and patient self-management in improving medication adherence, and (2) the contribution of community empowerment and social support in strengthening adherence behaviors. These themes were derived through comparative analysis of the intervention approaches, contextual factors, and outcomes reported across the studies.

Based on the synthesis of the included studies, two major themes were identified regarding factors influencing medication adherence among hypertensive patients. The first theme concerns the role of self-care education and patient self-management in improving adherence. The second theme highlights the contribution of community empowerment and social support in strengthening long-term treatment adherence. These themes were derived from a comparative analysis of the intervention approaches, contextual factors, and outcomes reported across the six included studies.

The Influence of Education and Self-Care Management on Medication Adherence in Hypertensive Patients

Based on the analysis of the included studies, self-care education and patient self-management interventions play a crucial role in improving medication adherence among individuals with hypertension. The study conducted by (Abza et al., 2024) in Ethiopia revealed that although only 50.8% of hypertensive patients demonstrated good adherence to self-care practices, several significant contributing factors were identified. One such factor was body mass index (BMI), with patients with a normal BMI being 2.05 times more likely to adhere to self-care guidelines than obese patients with Adjusted Odds Ratio (AOR) = 2.049. This may be attributed to individuals with a normal BMI generally adopting healthier lifestyles and finding it easier to implement lifestyle changes, such as maintaining a balanced diet and engaging in regular physical activity (Alanazi, 2025).

Additionally, a shorter duration of antihypertensive medication use (less than five years) was associated with better adherence. Newly diagnosed patients may have greater awareness of the importance of treatment adherence and the potential risks of uncontrolled hypertension (Bhusal et al., 2022; Tania et al., 2019). Another key factor was strong social support, which was significantly associated with better adherence. Patients receiving strong social support were 3.84 times more likely to adhere to self-care practices (AOR = 3.842). Social support is essential as it motivates patients to maintain healthy behaviors and ensures continuity in adhering to medical recommendations (Shahin et al., 2021).

J. Publ. Kes. Masy. Ind., 2026; 13(1): pp. 36-47.
P-ISSN: 2407-1625 | E-ISSN: 2581-0901
DOI: https://dx.doi.org/10.20527/jpkmi.v13i1.22872

Similar findings were observed in the study by (Jariyasakulwong et al., 2025) in Thailand, where 80.1% of patients with uncontrolled hypertension exhibited poor self-care practices. Social support emerged as a critical determinant, patients with moderate levels of social support were the Odds Ratio (OR) 2.23 times more likely to have poor self-care practices than those with high social support (OR = 2.23). This highlights the importance of external factors, namely, family, peers, and community, in supporting patients' treatment adherence. Environmental factors also played a significant role. Patients living in areas with limited resources to support a healthy lifestyle, such as limited access to nutritious food or recreational facilities, were more likely to be nonadherent to treatment and self-care recommendations. These findings underscore that both individual factors and broader environmental contexts play an important role in hypertension management and treatment adherence (Mills et al., 2020). Added a new perspective by demonstrating that intensive face-to-face education yielded better outcomes than educational interventions via pamphlets or SMS. The group receiving direct education showed significant improvements in vegetable consumption, reductions in high-sodium food intake, and increased adherence to antihypertensive treatment. These findings highlight that direct interaction with healthcare providers effectively conveys the importance of lifestyle changes and appropriate treatment. Face-to-face education fosters more profound understanding, allows patients to ask questions, and provides opportunities for clarifying concerns, advantages not typically offered by passive communication methods such as pamphlets or SMS (Golshahi et al., 2015).

Taken together, these findings suggest that educational interventions combined with social and environmental support play a critical role in improving medication adherence among hypertensive patients (Isiguzo et al., 2022; Rashid et al., 2024). Despite differences in study settings and methodologies, the evidence consistently indicates that interactive and patient-centered educational approaches are more effective than passive information delivery methods (Lee et al., 2018). However, variations in intervention strategies and contextual factors across the studies indicate a degree of heterogeneity, suggesting that the effectiveness of these interventions may depend on healthcare accessibility, social support systems, and cultural contexts (Mills et al., 2020). Therefore, integrating patient education with supportive community environments may provide a more sustainable strategy for improving adherence and long-term hypertension management.

The Role of Community Empowerment in Enhancing Education and Medication Adherence for Hypertension Management

Community empowerment has emerged as an important strategy in improving medication adherence among individuals with hypertension. Community-based interventions aim to enhance patients' capacity to manage their health by strengthening health literacy, social support networks, and access to relevant health information. These approaches recognize that hypertension management is not solely dependent on individual behavior but is also influenced by social and environmental contexts (Azami-Aghdash et al., 2025; Nyame, 2024).

Evidence from the included studies highlights the significant role of social support in supporting adherence to hypertension treatment. The study conducted by (Amadu et al., 2025) in Ghana report that although a considerable proportion of patients demonstrated good adherence to antihypertensive medication, their overall quality of life remained relatively low. This finding suggests that pharmacological treatment alone may not be sufficient to improve

long-term health outcomes. Social support from family members, peers, and community networks plays an essential role in maintaining patients' motivation to continue treatment and cope with the long-term burden of chronic disease.

Additionally, deeper insights were revealed by the study conducted by (Waris et al., 2025) found that inadequate knowledge about hypertension was strongly associated with poor medication adherence among patients in Pakistan. A large proportion of participants had limited understanding of hypertension and its potential complications, which contributed to low adherence levels. These findings indicate that insufficient health literacy may hinder patients' ability to recognize the importance of consistent treatment, particularly for conditions such as hypertension that often present without obvious symptoms.

Beyond improving knowledge, community empowerment interventions also facilitate supportive environments that encourage healthy behaviors. Community-based health programs, including educational campaigns, peer-support groups, and community health worker involvement, may help patients maintain adherence to medication and adopt healthier lifestyles. By involving family members and local communities in hypertension management, these interventions can strengthen accountability and reinforce positive behavioral changes among patients (Jeet et al., 2021; Neupane et al., 2020).

Taken together, the findings from the included studies suggest that community empowerment contributes to improved medication adherence through two primary mechanisms: strengthening social support systems and increasing patient knowledge about hypertension management (Listyorini et al., 2025). Community engagement initiatives that combine education, peer support, and accessible health services may create environments that enable patients to sustain long-term adherence behaviors.

However, the included studies also demonstrate methodological and contextual heterogeneity. Differences were observed in study designs, intervention strategies, and outcome measurement tools used to assess medication adherence. Some studies emphasized structured community-based educational programs, while others focused primarily on social support mechanisms. These variations may influence the reported effectiveness of community empowerment interventions and limit direct comparison across studies (Azami-Aghdash et al., 2025; Shahin et al., 2021).

Additionally, several limitations were identified within the primary studies. Many relied on cross-sectional designs and self-reported adherence measures, which may introduce recall bias and limit the ability to establish causal relationships between community empowerment interventions and adherence outcomes. Despite these limitations, the overall evidence suggests that integrating community empowerment strategies into hypertension management programs may significantly enhance medication adherence and improve long-term health outcomes.

The Influence of Community Empowerment and Self-Care Education on Medication Adherence in Hypertensive Patients

Effective hypertension management requires a high level of medication adherence from patients. However, despite the availability of treatment, many individuals with hypertension do not adhere consistently to their prescribed regimens. Based on the analysis of journals reviewed in Focus Study 1 (FS1) and Focus Study 2 (FS2), two key factors were identified as having a significant impact on hypertension medication adherence: community empowerment

and self-care education. These two factors are interrelated and have been shown to improve adherence in various contexts significantly.

Community empowerment strengthens social support, which plays a critical role in hypertension management. A study by (Amadu et al., 2025) in Ghana demonstrated that strong family and community support enhances adherence to hypertension treatment. Patients who feel supported by those closest to them, such as family members or friends, are more likely to follow their treatment plans regularly. This is because social support offers emotional encouragement and practical assistance, such as reminding patients about their medication schedule or encouraging healthy lifestyle practices. When community empowerment includes such forms of support, patients feel more capable of maintaining their health and are more motivated to adhere to their treatment.

Furthermore, (Golshahi et al., 2015) found that community empowerment also contributes to improving patients' knowledge of hypertension and how to manage it. In this study, a community-based approach involving intensive face-to-face education proved significantly more effective than distributing informational materials like pamphlets or text messages. Patients who participated in education programs that directly interacted with healthcare providers showed substantial improvements in self-care behaviors, such as reduced salt intake, increased vegetable consumption, and greater adherence to antihypertensive medication. These face-to-face interactions allowed patients to ask questions, receive clear explanations, and feel more personally attended to, thereby increasing their motivation to comply with treatment consistently.

However, community empowerment does not only involve education on pharmacological treatment, but also on promoting healthy lifestyle changes. For example, research by (Waris et al., 2025) in Pakistan revealed that adequate knowledge about hypertension is strongly associated with higher adherence rates. Among the 252 patients surveyed, most had limited understanding of hypertension, leading to poor awareness of the importance of proper treatment and self-management. This study emphasizes the necessity of educating patients not only on correct medication use but also on lifestyle interventions, including dietary habits, physical activity, and prevention of complications. Such education is vital to improving patients' comprehension of their illness and enhancing their awareness of their role in managing it.

Additionally, findings from (Jariyasakulwong et al., 2025) confirmed that social support greatly influences self-care behaviors among patients. Those with strong social support systems were more likely to engage in effective self-care practices, ultimately improving their blood pressure control. This research illustrates that when patients receive support from their families or communities, they are more motivated to follow medical advice, exercise regularly, reduce salt intake, and adhere strictly to their prescribed treatments. Social support in the form of active community involvement can foster an environment conducive to lifestyle change, which is essential for hypertension patients to maintain treatment adherence and reduce the risk of further complications (Wu et al., 2024).

Community empowerment particularly when it incorporates social support and self-care education has a profound impact on medication adherence among hypertensive patients. When individuals feel empowered through proper education and receive consistent support from their surrounding communities, they are more likely to adopt behavior changes and adhere to their treatments consistently (Guo et al., 2023). Therefore, effective hypertension management strategies must not rely solely on medical interventions but also include community-based empowerment through education and robust social support systems.

Through this comprehensive approach, it is anticipated that adherence to hypertension treatment will improve, thereby reducing complication rates and enhancing patients' overall quality of life (Carey et al., 2021).

Overall, the findings of this review highlight that improving medication adherence among hypertensive patients requires a comprehensive approach that integrates patient education with community-based empowerment strategies. Educational interventions enhance patient knowledge and self-management capacity, while community empowerment strengthens social support and facilitates sustainable behavioral change. Integrating these approaches into public health programs may provide a more effective strategy for improving hypertension management and reducing long-term complications.

CONCLUSION

Community empowerment and self-care education are key factors in improving adherence to hypertension treatment. Social support and patient education motivate individuals to follow medical advice, manage their condition, and maintain healthy behaviors. Self-care education increases knowledge about hypertension, helping patients make informed decisions and stick to their prescribed regimens. Combining community involvement with educational programs strengthens support systems and reinforces commitment to treatment. This integrated approach leads to better blood pressure control, reduced complications, and improved quality of life. Health policies and programs should prioritize these strategies to achieve better outcomes for people with hypertension. Further research is needed to evaluate these interventions in diverse populations.

REFERENCES

Abza, L. F., Yesuf, M. A., Emrie, A. A., Belay, A. S., Bekele, T. G., Tetema, M. D., Berrie, F. W., & Baymot, A. (2024). Self-care adherence and associated factors among hypertensive patients at Guraghe Zone public hospitals, Ethiopia. Heliyon, 10(9), e36985.

Alanazi, Z., Alanazi, R., Alanazi, H., & Alanazi, J. (2025). A systematic review of adherence to lifestyle modifications by hypertensive patients. Eastern Mediterranean health journal = La revue de sante de la Mediterranee orientale = al-Majallah al-sihhiyah li-sharq al-mutawassit, *31*(9&10), 590–596. https://doi.org/10.26719/2025.31.10.590

Amadu, A. B., Konlan, K. D., Amadu, J. B., & Dzansi, G. (2025). Treatment Adherence and Quality of Life of Adults Living With Hypertension in Rural Ghana. *Nursing open*, *12*(3), e70198. https://doi.org/10.1002/nop2.70198.

Azami-Aghdash, S., Joudyian, N., Jafari, S., Karami, S., & Rezapour, R. (2025). Assessing Community-Based interventions effectiveness on hypertension prevention and control: A systematic review and Meta-Analysis. *BMC public health*, *25*(1), 3253. https://doi.org/10.1186/s12889-025-24283-x.

Bhusal, K., Kafle, R., & Bhattarai, B. (2022). Medication adherence among hypertensive patients and associated factors in Nepal: A cross-sectional study. BMC Cardiovascular Disorders, 22, 92.

Burnier, M., & Egan, B. M. (2019). Adherence in Hypertension. *Circulation research*, *124*(7), 1124–1140. https://doi.org/10.1161/CIRCRESAHA.118.313220.

Carey, R. M., Muntner, P., Bosworth, H. B., & Whelton, P. K. (2018). Prevention and Control of Hypertension: JACC Health Promotion Series. *Journal of the American College of*

Cardiology, *72*(11), 1278–1293. https://doi.org/10.1016/j.jacc.2018.07.008.

Delavar, F., Pashaeypoor, S., & Negarandeh, R. (2020). The effects of self-management education tailored to health literacy on medication adherence and blood pressure control among elderly people with primary hypertension: A randomized controlled trial.. *Patient education and counseling*. https://doi.org/10.1016/j.pec.2019.08.028.

Golshahi, S., Karim, M., & Ramezani, M. (2015). Effectiveness of face-to-face education on improving self-care behaviors and controlling blood pressure in hypertensive patients. Journal of Hypertension and Therapy, 6(2), 179–185. https://doi.org/10.4103/2277-9175.166140.

Guo, A., Jin, H., Mao, J., Zhu, W., Zhou, Y., Ge, X., & Yu, D. (2023). Impact of health literacy and social support on medication adherence in patients with hypertension: a cross-sectional community-based study. *BMC Cardiovascular Disorders, 23*. https://doi.org/10.1186/s12872-023-03117-x.

Hamrahian, S. M., Maarouf, O. H., & Fülöp, T. (2022). A Critical Review of Medication Adherence in Hypertension: Barriers and Facilitators Clinicians Should Consider. *Patient preference and adherence*, *16*, 2749–2757. https://doi.org/10.2147/PPA.S368784.

Heydari, H., Sadeghi, R., Jamshidi, E., Rahimiforoushani, A., Nikbakht, H. A., & Mashhadsari, M. R. A. (2025). Effectiveness of community-based intervention using PATCH on disease perception, empowerment, and self-care in hypertension: a community trial protocol. *Trials*, *26*(1), 91. https://doi.org/10.1186/s13063-025-08743-8.

Himmelfarb, C. D., & Commodore_Mensah, Y. (2016). Expanding the role of community health workers. Current Hypertension Reports, 18.

Institute, J. B. (2020). Joanna Briggs Institute Reviewer's Manual. Joanna Briggs Institute.

Isiguzo, G. C., Santo, K., Panda, R., Mbau, L., Mishra, S. R., Ugwu, C. N., Virani, S. S., Odili, A. N., & Atkins, E. R. (2022). Adherence Clubs to Improve Hypertension Management in Nigeria: Clubmeds, a Feasibility Study. *Global heart*, *17*(1), 21. https://doi.org/10.5334/gh.1109.

Jafar Gandhi, M., & Jehan, I. (2017). Community_based interventions to promote blood pressure control. Lancet Global Health, 5.

Jariyasakulwong, P., Wattanakitkrileart, D., Pongthavornkamol, K., Piaseu, N., & Roubsanthisuk, W. (2025). Factors Influencing Self-Care Practices and Blood Pressure Among Individuals with Uncontrolled Hypertension: A Cross-Sectional Study. *Patient preference and adherence*, *19*, 1–17. https://doi.org/10.2147/PPA.S497555.

Jeet, G., Thakur, J. S., Prinja, S., & Singh, M. (2017). Community health workers for non-communicable diseases prevention and control in developing countries: Evidence and implications. *PloS one*, *12*(7), e0180640. https://doi.org/10.1371/journal.pone.0180640.

Kementrian Kesehatan Republik Indonesia. (2023). Fact Sheet Kesehatan Jiwa Remaja Tahun 2023. Ski 2023.

Krousel-Wood et al., M. (2019). Medication adherence in hypertension and cardiovascular disease. American Journal of Hypertension, 32.

Lee et al., G. K. (2018). Self-management education programs in hypertension. Patient Education and Counseling, 101, 1822–1831.

Listyorini, P., Witriyani, W., & Noor, H. (2025). From Knowledge to Adherence: Implementing Health Promotion Model in Hypertension Self-Management Education. *Proceeding of*

International Conference on Science, Health, And Technology. https://doi.org/10.47701/d0b0tk60.

Mills, K. T., Bundy, J. D., Kelly, T. N., Reed, J. E., Kearney, P. M., Reynolds, K., Chen, J., & He, J. (2016). Global Disparities of Hypertension Prevalence and Control: A Systematic Analysis of Population-Based Studies From 90 Countries. *Circulation*, *134*(6), 441–450. https://doi.org/10.1161/CIRCULATIONAHA.115.018912.

Mills, K. T., Stefanescu, A., & He, J. (2020). The global epidemiology of hypertension. *Nature reviews. Nephrology*, *16*(4), 223–237. https://doi.org/10.1038/s41581-019-0244-2.

Neupane, D., McLachlan, C. S., Mishra, S. R., Olsen, M. H., Perry, H. B., & Kallestrup, P. (2020). Effectiveness of community-based interventions for hypertension management: A systematic review. Global Heart, 15(1), 1–12.

Nyame, S., Boateng, D., Heeres, P., Gyamfi, J., Gafane-Matemane, L. F., Amoah, J., Iwelunmor, J., Ogedegbe, G., Grobbee, D., Asante, K. P., & Klipstein-Grobusch, K. (2024). Community-Based Strategies to Improve Health-Related Outcomes in People Living With Hypertension in Low- and Middle-Income Countries: A Systematic Review and Meta-Analysis. *Global heart*, *19*(1), 51. https://doi.org/10.5334/gh.1329..

Rashid, A., Ejara, D., & Deybasso, H. A. (2024). Adherence to antihypertensive medications and associated factors in patients with hypertension, Oromia, Ethiopia: a multicenter study. *Scientific reports*, *14*(1), 30712. https://doi.org/10.1038/s41598-024-80086-x.

Sakinah, S., Dee, T., & Tusi, J. (2024). The Effect of Self-Management Education Based on the Health Promotion Model on Compliance Behavior of Hypertension Patients. *Babali Nursing Research*. https://doi.org/10.37363/bnr.2024.54431.

Shahin, W., Kennedy, G. A., & Stupans, I. (2021). The association between social support and medication adherence in patients with hypertension: A systematic review. *Pharmacy practice*, *19*(2), 2300. https://doi.org/10.18549/PharmPract.2021.2.2300.

Susanti, M., Triyana, R. Y., & Nurwiyeni. (2022). Edukasi hipertensi dan pencegahan komplikasi hipertensi pada pasien Puskesmas Dadok Tunggul Hitam. Jurnal Abdimas Saintika, 3(2), 153–157. http://dx.doi.org/10.30633/jas.v3i2.1246.

Tania, T., Yunivita, V., & Afiatin, A. (2019). Adherence to antihypertensive medication in patients with hypertension in Indonesia. International Journal of Integrated Health Sciences, 7(2). https://doi.org/10.15850/ijihs.v7n2.1588.

Waris, B., Butt, N. I., Afzal, A., Ghoauri, M. S. A., Khizar, I., Mahmood, K., & Qureshi, M. A. (2025). Exploring Knowledge of Hypertension and Treatment Adherence in Hypertensive Patients From Lahore, Pakistan. *Cureus*, *17*(4), e81762. https://doi.org/10.7759/cureus.81762.

Wu, Y., Xiong, S., Zhu, G., Chen, X., Zhang, M., Gong, E., Li, C., Jia, P., Østbye, T., & Yan, 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*. https://doi.org/10.1016/j.rcsop.2024.100482.