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BARRIERS TO HYPERTENSION THERAPY ADHERENCE: A SCOPING REVIEW

Hambatan terhadap Kepatuhan Terapi Hipertensi: A Scoping Review

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ABSTRAK

Hipertensi merupakan penyakit kronik tidak menular bersifat "silent killer" tidak menunjukkan gejala yang jelas yang dapat menyebabkan komplikasi serius jika tidak di terapi. Penelitian ini bertujuan untuk mengidentifikasi dan memetakan hambatan yang mempengaruhi kepatuhan pasien terhadap terapi hipertensi, baik pengobatan farmakologis maupun perubahan gaya hidup, serta mengeksplorasi faktor sosial, psikologis, ekonomi, budaya, dan sistem kesehatan yang berkontribusi terhadap rendahnya kepatuhan pasien. Penelitian ini menerapkan metode cakupan berdasarkan kerangka kerja yang ditulis oleh Arksey dan O'Malley. Artikel dicari melalui data dasar Science Direct, Scopus, dan ProQuest dengan menggunakan kata kunci ("Antihipertensi" ATAU "Hipertensi") DAN ("Hambatan") DAN ("Orang Dewasa") DAN ("Terapi" ATAU "Perawatan") DAN ("Modifikasi gaya hidup"), meliputi publikasi tahun 2020 sampai dengan 2025, berbahasa Inggris dan teks lengkap. Setelah melalui tahap seleksi, diperoleh 21 artikel yang memenuhi kriteria inklusi untuk dianalisis lebih lanjut. Analisis ini menunjukkan ada berbagai hambatan kepatuhan terapi yaitu faktor pasien, terapi, kondisi medis, sosial ekonomi dan sistem kesehatan. Faktor pasien kurangnya pengetahuan, literasi kesehatan rendah, dan motivasi rendah. Faktor terapi meliputi efek samping obat dan ketersediaan obat tidak konsisten. Faktor kondisi medis yaitu komorbiditas, hipertensi asimtomatik. Faktor sosial ekonomi yaitu pendapatan rendah dan pendidikan rendah. Faktor sistem kesehatan meliputi komunikasi rendah dan perawatan primer terbatas. Hambatan tersebut bersifat kompleks dan saling terkait. Meningkatkan kepatuhan membutuhkan pendekatan holistik yang mempertimbangkan aspek individu, sosial, budaya dan sistem kesehatan.

Kata kunci: hambatan kepatuhan, hipertensi, kepatuhan terapi, scoping review

ABSTRAK

Hypertension is a chronic non-communicable disease that is a "silent killer" with no obvious symptoms that can cause serious complications if left untreated. This study aims to identify and map the barriers affecting patient adherence to hypertension therapy, both pharmacological treatment and lifestyle changes, as well as explore the social, psychological, economic, cultural, and health system factors that contribute to low patient adherence. This study applies a scoping method based on the framework written by Arksey and O'Malley. Articles were searched through the Science Direct, Scopus, and ProQuest databases using the keywords ("Antihypertensive" OR "Hypertension") AND ("Barriers") AND ('Adults') AND ("Therapy" OR "Care") AND ("Lifestyle Modification"), covering publications from 2020 to 2025, in English and full text. After the selection process, twenty-one articles meeting the inclusion criteria were analyzed. This analysis revealed various barriers to treatment adherence, namely patient factors, treatment factors, medical conditions, socioeconomic factors, and healthcare system factors. Patient factors included lack of knowledge, low health literacy, and low motivation. Treatment factors included drug side effects and inconsistent drug availability. Medical condition factors included comorbidities and asymptomatic hypertension.

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Socioeconomic factors included low income and low education. Health system factors included poor communication and limited primary care. These barriers are complex and interrelated. Improving adherence requires a holistic approach that considers individual, social, cultural, and health system aspects.

Keywords: barriers to compliance, hypertension, scoping review, treatment compliance

INTRODUCTION

Hypertension is one of the biggest global health problems, with a prevalence of more than 1 billion people worldwide [1]. This condition is a major cause of cardiovascular disease, including stroke and heart disease, and contributes to approximately 9.4 million deaths each year [2]. The WHO reports that only one in five people with hypertension successfully controls their blood pressure [1]. The high prevalence and low control rate have led to hypertension being dubbed the “silent killer” because it often goes undetected until complications arise [1],[3]. Risk factors for hypertension are divided into unmodifiable factors, such as age, gender, and genetics, and modifiable factors such as obesity, salt intake, high-fat diet, smoking, alcohol, stress, and lack of physical activity. Prevention efforts through healthy lifestyle changes and early detection are key strategies in reducing the global burden of hypertension [1].

Pathophysiologically, hypertension is divided into primary hypertension (90–95% of cases), which is influenced by genetic and lifestyle interactions, and secondary hypertension (5–10% of cases) due to kidney disease, hormonal disorders, or the use of certain medications. Blood pressure increases due to peripheral resistance, sodium retention, and hormonal dysregulation that disrupts blood vessel elasticity. Adherence to therapy plays an important role in keeping blood pressure under control and preventing further complications [4]. However, many patients remain noncompliant with treatment and lifestyle changes due to limited knowledge, perceptions of vulnerability, disease severity, and self-efficacy [4],[5]. Therefore, further research on risk factors, pathophysiological mechanisms, and treatment adherence is essential as a basis for hypertension control interventions[1], [4].

In addition to the factors mentioned above, psychosocial and cultural factors also play a significant role. Studies show that stress, anxiety, depression, and social stigma associated with long-term medication use can reduce patient adherence. Reliance on traditional or herbal remedies, which are cheaper and more reliable in some communities, is also a reason for patients to discontinue prescribed antihypertensive medication [6]. This study shows that adherence is influenced by complex factors such as personal beliefs, risk perception, self-efficacy, social stigma, family support, financial constraints, and access to healthcare, which vary across local contexts, including reliance on traditional medicine and high-salt dietary habits. Although many studies have examined patient adherence to hypertension therapy, most focus only on partial aspects such as individual behavior or drug-related side effects. There is still a lack of comprehensive studies that map barriers to adherence across multiple dimensions — including patient, therapeutic, medical, socioeconomic, cultural, and health system factors. This gap highlights the need for a scoping review that synthesizes findings from various studies to provide an integrated perspective. By identifying these multidimensional barriers, this review aims to generate evidence that can serve as a basis for holistic interventions to improve therapy adherence and reduce hypertension complications. Therefore, this study aims to identify barriers to adherence in hypertension patients, both related to medication and lifestyle changes, as well as the social, psychological, economic, cultural, and healthcare system factors that influence them.

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METHODS

This study employs a scoping review methodology to map barriers influencing compliance among patients with hypertension, both related to medication and lifestyle changes, with the methodological framework of Arksey and O'Malley (2005)[7]. Articles were searched through Science Direct, Scopus, and ProQuest databases using keywords ("Antihypertensive" OR "Hypertension") AND ("Barriers") AND ("Adults") AND ("Therapy" OR "Treatment") AND ("Lifestyle modification"), covering full-text English publications from 2020–2025. The search yielded 961 articles (261 from Science Direct, 50 from Scopus, and 650 from ProQuest). After thorough screening and reading, 29 articles were identified, and 8 were removed for not meeting the inclusion criteria, leaving 21 articles for further analysis. The selection process is shown in the Prisma Flowchart in Figure 1.

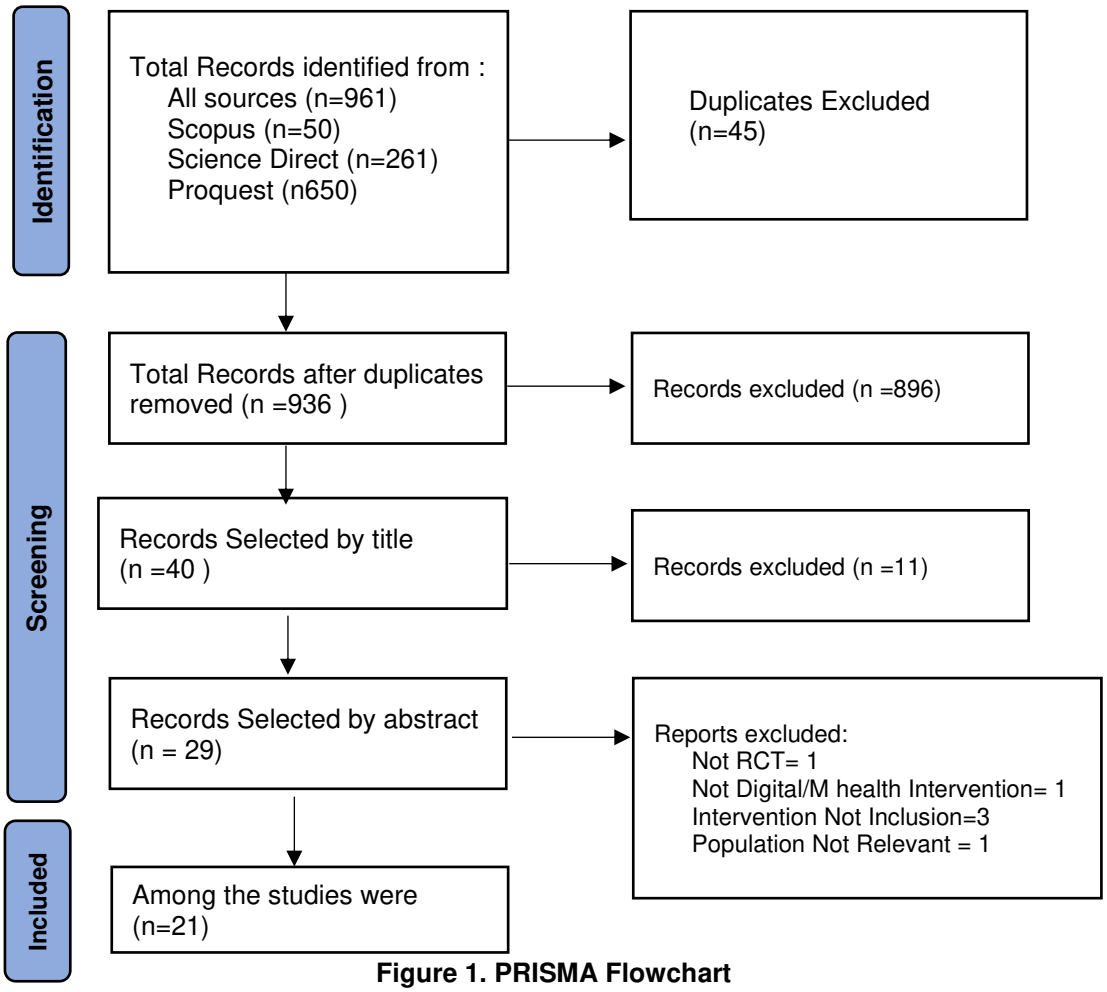

Figure 1. PRISMA Flowchart

Identifying Research Questions

The research questions identified are as follows: What are the main obstacles that influence patient compliance with hypertension therapy, both in the form of medication and lifestyle changes, and what are the social, psychological, economic, cultural, and health system factors that cause low compliance with hypertension therapy?[7]

Identification of Relevant Studies and Study Selection

Through a literature search in several databases such as Science Direct, Scopus, and Proquest. The search was conducted using keywords ("Antihypertensive" OR "Hypertension") AND ("Barrier") AND ("Adult") AND ("Therapy" OR "Treatment") AND ("Lifestyle Modification"). Articles published between 2020 and 2025 and in English.

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Minimum 6 months old. Selected articles were in English, available in full text, and open access [3].

The study selection process used the Rayyan application to screen articles. Articles were uploaded to Rayyan and screened based on predetermined inclusion and exclusion criteria, such as discussing barriers to adherence to hypertension therapy in adults, being relevant, being in English, and being published in the last five years. Duplicate articles were removed, and then title and abstract screening were performed. Articles that did not address barriers to adherence, were published within the last five years, involved individuals under 40 years of age, were not open access, or were not in English were excluded. Articles that met the criteria proceeded to full-text screening.

Data extraction

The data extraction process was performed periodically using Microsoft Excel. The extraction table included information such as the identity of the study author, year, country, objective, study design, location, population, and factors associated with barriers to adherence to hypertension therapy [4].

RESULT

Characteristics of research

Table 1. Data Charting

No	Author(s)/Year/Title	Objective	Study Locations	Methods	Population & Sample
1	Hussien dkk., 2021 [8] / "The Role of Health Care Quality in Hypertension Self-Management: A Qualitative Study of the Experience of Patients in a Public Hospital, North-West Ethiopia."	Experiences of Hypertension patients regarding the quality of health service and self-management practice	Bahir Dar, Etiopia Barat Laut	Qualitative, phenomenological approach, in-depth interviews	11 patients and 2 nurses were selected purposively using the maximum variation
2	Shim et al, 2020 [9] / "Factors associated with dietary adherence to the guidelines for prevention and treatment of hypertension among Korean adults with and without hypertension."	To identify factors associated with adherence to dietary guidelines for the prevention and treatment of hypertension in Korean adults, both with and without hypertension	South Korea	Quantitative, observational survey using questionnaires and physical examinations	Population : Adults aged 34 – 69 years from the CMERC cohort study Sample : 497 individuals purposively sampled (follow-up data from cohort participants)
3	Yaqoob dkk, 2022 [10] / "Awareness, treatment, and practices of lifestyle modifications amongst diagnosed hypertensive patients attending the tertiary care hospital of Karachi: A cross-sectional study."	To evaluate the level of awareness, treatment, and lifestyle change practice in hypertensive patients who have been diagnosed and are undergoing treatment	Distrik Korangi Karachi, Pakistan	Quantitative Method (Questionnaire & blood pressure measurement)	Population: Hypertensive patients treated as outpatients and inpatients at Jinnah Medical College Hospital Sample : 425 patients, selected purposively
4	Adeola J, Obiezu F Odukoya O, Igwilo U, Usinoma A, Bahiru E, May FP, dkk. [5] / "Barriers and Facilitators to Risk Reduction of Cardiovascular Disease in Nigeria"	To explore the perceptions of heart disease risk in hypertensive patients and identify barriers and enabling factors to reduce the risk of heart disease	Lagos University Teaching Hospital	Cross-sectional, survey, semi-quantitative approach, using closed and open questionnaires	Population : Hypertensive patients receiving outpatient care at cardiology, nephrology, and family medicine clinics Sample: 256 hypertension patients
5	Tjandrarini dkk, 2024 [11] / " Pandemic Pressure:	to analyze compliance with hypertension	Bogor City, West	Observational with two data	880 hypertensive patients

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No	Author(s)/Year/Title	Objective	Study Locations	Methods	Population & Sample
	Changes in Hypertensive Management Adherence in Indonesia."	management, including therapy and blood pressure monitoring, before and during the COVID-19 pandemic	Java, Indonesia	sources (pre-pandemic from a 2019 cohort study, and a 2020 online survey)	
6	Apichaya Kongsa, Praleena Thongsri, Araya Chiangkhong, Angkana Chongjarearn (2014) [12] / " Perceptions of Medication Adherence among Elderly Patients with Hypertension in Bangkok: A Qualitative Study	To explore the perceptions and experiences of elderly hypertensive patients in Bangkok regarding adherence to antihypertensive medication.	Bangkok, Thailand	Qualitative, in-depth interviews	20 individuals, selected purposively because they meet the research criteria
7	Setiadi AP, Widiyastuti S, Mariati IGAD, Sunderland B, Wibowo YI (2022) [13] / "Socioeconomic impacts on medication adherence among patients with hypertension: A multicentre cross-sectional study in Lombok, Indonesia	Assessing the influence of socioeconomic factors on medication adherence of hypertensive patients in Lombok, Indonesia	Lombok Island, West Nusa Tenggara Province, Indonesia	Multicentre cross-sectional study	Population : Outpatients with hypertension in 6 public hospitals Sample: 693 hypertensive patients
8	Diane Macquart de Terline dkk. (2020) [14] / " Poor adherence to medication and salt restriction as barriers to reaching blood pressure control in patients with hypertension: Cross-sectional study from 12 sub-Saharan countries."	To assess adherence to medication and salt restriction in hypertensive patients in 12 Sub-Saharan African countries, and to examine the relationship between adherence and blood pressure control.	Afrika Sub-Saharan	Cross-Sectional	Population : Hypertensive patients undergoing outpatient consultations Sample: 2.198 patients with hypertension
9	Anika Bushra Boitchi, Shabnam Naher, Sabbir Pervez, Md, Majibul Anam (2021) [15] / " Patients understanding, management practices and challenges regarding hypertension: A qualitative study among hypertensive women in a rural Bangladesh."	To explore the understanding, management practices, and challenges of women with hypertension in rural Bangladesh	Kushtia, District, Bangladesh	Qualitative study with a phenomenological approach, using in-depth interviews	Population : Women with hypertension in rural areas Sample: 23 hypertensive women (aged 35-65 years) were selected using purposive and snowball sampling
10	Gebremedhin Hailu, Muluken Yigezu, Hardof Gutema, dkk. (2025) [16] / "Self-care practice and associated factors among hypertensive patients who have follow-ups in public hospitals of Bahir-Dar City, Northwest Ethiopia: a mixed study	To assess self-care practice and associated factors, and explore barriers to these practices in hypertensive patients	Northwestern Ethiopia	A descriptive cross-sectional study triangulated with a qualitative study	Population : All hypertensive patients undergoing routine check-ups at public hospitals Sample: Quantitative: 423 hypertensive patients Qualitative: 8 participants purposively selected for in-depth interviews
11	Assen Muhe dkk. (2025) [17] / " Self-care behaviors and Associated Patients at Dassie	To assess self-care behaviors and related factors in outpatients	Dessie, Ethiopia	Mixed-methods research with	Population :

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No	Author(s)/Year/Title	Objective	Study Locations	Methods	Population & Sample
	Referral Hospital, Northeast Ethiopia'	with hypertension at Dassie Referral Hospital, Ethiopia	Timur Laut	an explanatory sequence approach; quantitative data through questionnaires and qualitative in-depth interviews	All 4,612 hypertensive patients undergoing routine check-ups Sample: 370 hypertensive patients (364 respondents, quantitative and 14 for qualitative, selected using systematic random and purposive sampling
12	Alireza Ghannadi, Fatemeh Mohammadkhah, Pooyan Afzali Harsini, Afsaneh Ghasemi, Amirhossein Kamyab, Ali Khani Jeihooni (2024) [18] / "Effect of Educational intervention by application of PRECEDE-PROCEED model on Lifestyle Change in Hypertensive Patients."	To assess self-care practices and associated factors in hypertensive patients at a public health facility in Bule Hora town, southern Ethiopia	Oromia, Ethiopia Selatan	Quantitative, Cross-sectional design, using questionnaires and logistic regression analysis	Population : Hypertensive patients at the Bule Hora Town Public Health facility Sample: 403 patients, selected using systematic random sampling
13	Yusupha Dibba dkk. (2024) [19] / "Non-communicable disease care in Sierra Leona: a mixed-methods study of the drivers and barriers to retention in care for hypertension:	To analyze the drivers and barriers to hypertension care in Sierra Leona	Kono District, Sierra Leona	Mixed-methods study: quantitative data analysis and qualitative interviews	Population : Hypertensive patients at the NCD Clinic Sample : 1,628 patients (quantitative) and 28 participants (qualitative: 13 adherent patients, 8 LTFU, 7 staff)
14	Sanju Bhattarai dkk, (2023) [20] / "Facilitators and barriers to hypertension management in urban Nepal: findings from a qualitative study."	To explore factors that facilitate and hinder hypertension management in urban Nepal, taking into account individual, interpersonal, health system, and community factors.	Kathmandu, Nepal	Quasi-experimental design with pre- and post-test on intervention and control groups	Population : HIV patients in two tertiary hospitals in Kaduna State, Nigeria Sample: 226 HIV patients (113 in the intervention group, 113 in the control group)
15	Yingxian Sun, Jianjun Mu, Dao Wen Wang, dkk. (2022) [21] / " A Village doctor-led multifaceted intervention for blood pressure control in rural China: an open, cluster randomised trial."	To determine the effectiveness of a multifaceted intervention led by village doctors to control blood pressure in rural communities	District Kasungu, Malawi	Quasi-experimental design with pre- and post-test on intervention and control groups	Population : Village Health Workers in Kasungu Sample: 35 Village health workers who met the inclusion criteria
16	Chonticha Chantakeeree dkk, (2022) [22] / " Understanding perspectives on health-promoting behaviors among older adults with hypertension	To describe the perceptions and experiences of elderly people with hypertension regarding health promotion behavior.	Chonburi, Thailand	Qualitative with semi-structured interviews	Population : Elderly (aged ≥ 60 years) Sample: 40 elderly individuals who met the following inclusion criteria
17	Rose Clarke Nanyonga, Lori A. Spies, Florence Nakaggwa (2022) [23]" The effectiveness	To assess the effectiveness of a nurse-led group	Kumpala, Uganda	Mixed methods with a sequential	Population :

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No	Author(s)/Year/Title	Objective	Study Locations	Methods	Population & Sample
	of nurse-led group interventions on hypertension lifestyle management: A mixed method study":	intervention on lifestyle management of hypertension.		explanatory design, combining quantitative and qualitative	Hypertensive patients undergoing treatment at an outpatient clinic. Sample: 54 participants who attendend ≥ 3 intervention session; 16 participants for focus groups; 2 nurse educator for interviews
18	Horvat O, Halgato T, Stojšić-Milosavljević A, dkk (2022) [24] / " Identification of patient-related, healthcare-related and knowledge-related factors associated with inadequate blood pressure control in outpatients: a cross-sectional study in Serbia	To identify patient, health system, and knowledge factors associated with inadequate blood pressure control.	Vojvodin, Serbia Utara	Cross-sectional study using a semi-structured questionnaire and blood pressure measurements	Population : Patients diagnosed with essential hypertension for at least 1 year and undergoing antihypertensive therapy for at least 6 months Sample: 581 hypertensive patients (330 from PHC and 251 from SHC
19	Pedro Pallangyo dkk (2022) [25] / " Medication Adherence and Blood Pressure Control Among Hypertensive Outpatients Attending a Tertiary Cardiovascular Hospital in Tanzania: A Cross-sectional study	To explore the level of medication adherence and associated factors among hypertensive outpatients at a tertiary-level heart hospital in Tanzania.	Dar es Salaam, Tanzania	Hospital-based cross-sectional quantitative study	Population : Outpatients with a diagnosis of hypertension Sample: A total of 849 outpatients with hypertension were recruited by simple random sampling during the clinic visit.
20	Buna Bhandari dkk (2021) [26] / " Barriers and facilitators for treatment and control of high blood pressure among hypertensive patients in Kathmandu, Nepal: a qualitative study informed by the COM-B model of behavior change	To explore the barriers and supporting factors in the treatment and control of hypertension in hypertensive patients in Nepal.	Kathmandu, Nepal	Qualitative research using in-depth interviews (IDIs) and Focus group discussions (FGDs)	Population : Hypertensive patients aged 30-17 Sample : 25 hypertensive patients IDIs 16 hypertensive FGDs 5 Family members, 11 health workers, and 4 key informants
21	Khairulnissa Ajani, Ambreen Gowani, Raisa Gul, Pamela Petrucka (2021) [27] / " Levels and predictors of self-care among patients with hypertension in Pakistan	To assess the level of self-care behavior and its predictors in hypertensive patients in Karachi, Pakistan	Karachi, Pakistan	Cross-sectional survey in a series of sequential mixed-method studies (quantitative-qualitative)	Population : Patient hypertension Sample: 402 patients with hypertension

A total of 21 articles published between 2020 and 2025 were reviewed, consisting of eight articles from developed countries (the United States, Canada, and the United Kingdom) and three articles from developing countries (Thailand, Turkey, and Brazil). Seven articles employed qualitative methods, two used mixed methods, and two utilized quantitative approaches (cross-sectional and cohort studies). Nine articles were rated as high quality (grade A), while two were rated as moderate quality (grade B). These articles provide a comprehensive understanding of hypertension management, including patient experiences, treatment adherence, and influencing factors across countries (Table 1).

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Barriers to Adherence to Hypertension Therapy

Table 2. Data Charting Barriers to Adherence to Hypertension Therapy

Obstacle Categories	Sub-Obstacles	Results
Patient Factors	a. Low knowledge b. Low Health Literacy c. Low motivation d. Therapy fatigue e. Physical/cognitive limitations f. Belief in traditional medicine	Patients often stop therapy when they feel well or believe in alternative treatments. Low health literacy and lack of motivation worsen adherence. Long-term medication fatigue and physical/cognitive impairments also contribute [16], [18], [24], [25].
Therapeutic Factors	a. Drug side effects b. Complexity of the regimen c. Medicine is not available d. Evaluation of low blood pressure e. Preference for herbal medicines	Side effects such as dizziness or digestive problems cause patients to discontinue their medications. Complicated medication schedules are confusing. Inconsistent drug availability in healthcare facilities, and some patients consider traditional medicine safer [16], [19], [20], [24], [21].
Medical Factors	a. Comorbidities (diabetes, kidney, etc.) b. Hypertension without symptoms c. Not regularly monitoring blood pressure	Patients with comorbidities often struggle with hypertension therapy management. Because hypertension is often asymptomatic, many patients fail to take their medication regularly. Lack of home blood pressure monitoring is also a challenge [16], [18], [24], [25].
Socioeconomic Factors	a. Low income b. Limited access to facilities c. Transportation costs d. Low education e. Job does not support	High medical and transportation costs are barriers, especially for those without insurance or living in remote areas. Low levels of education contribute to a lack of understanding of the importance of therapy. Busy work schedules also hinder access to healthcare [19], [22], [24], [25], [28].
Health System Factors	a. Short consultation time b. Poor medical staff communication c. Lack of further education d. Medications are not consistently available e. Lack of primary care	Patients receive inadequate information due to short consultations and high workloads among medical staff. Continuing health education is lacking. The quality of primary care is low and uneven across many regions. Logistical barriers force patients to purchase medications outside of healthcare facilities [16], [18], [20], [22], [25]

DISCUSSION

This review aimed to identify key barriers affecting adherence in hypertensive patients, both to treatment and lifestyle changes, and to explore contributing social, psychological, economic, cultural, and health system factors. The results indicate that these barriers are complex and interconnected.

Patient Barrier Factors

This review shows that individual factors play a significant role in poor adherence to hypertension therapy. Many patients lack an understanding of hypertension as a chronic disease and the importance of regular blood pressure monitoring [8], [10], so they stop the medication when they feel well [29]. Low health literacy, especially in patients with low education, makes it difficult for them to understand medical instructions [29], [16]. Low health literacy, especially in patients with low education, makes it difficult for them to understand medical instructions [29], [16]. Low motivation and lack of self-efficacy cause patients to be reluctant to make lifestyle changes such as a low-salt diet and exercise [9], [18]. Fatigue from taking long-term medication is also an obstacle [11], [25]. In addition, comorbidity and polypharmacy cause confusion regarding medication

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schedules [8], [10], physical and cognitive limitations hinder compliance [10], [13], as well as belief in traditional medicine or prayer causes inconsistency in therapy [5], [29].

Factors Inhibiting Therapy

Side effects of antihypertensive drugs, such as dizziness, fatigue, and digestive disorders, often cause patients to stop or reduce the dose of the drug [8], [10]. The complexity of the regimen, especially for patients with comorbidities, causes confusion and reluctance to take medication regularly [8], [10]. Inconsistent drug availability in healthcare facilities also disrupts therapy, as patients must purchase them from pharmacies at higher prices [8], [5]. Lack of blood pressure monitoring and compliance evaluation leads patients to stop therapy when they feel well [11], [16]. In addition, the use of traditional or herbal medicines is considered safer [29], [18], as well as a lack of understanding of the long-term goals of treatment [10], [29], also reduces compliance.

Barrier Factors to Medical Conditions

Many hypertensive patients have comorbidities such as diabetes, dyslipidemia, or kidney disease, which add to the complexity of therapy and increase the risk of side effects, thus reducing compliance [8], [10]. Side effects of the drug, such as dizziness, headaches, and digestive disorders, also make patients reluctant to continue therapy [8], [10]. Because hypertension is often asymptomatic, patients only take medication when symptoms occur [29], [10]. In addition, the use of traditional medicines without standard doses makes patients ignore medical drugs [29], [18]. Lack of home blood pressure monitoring and limited routine check-ups result in patients not understanding their blood pressure status [11], [16].

Socioeconomic Factors

Low-income patients often cannot afford antihypertensive drugs, especially if they are not available free of charge at health facilities [8], [5], [16], leading to discontinuation of therapy or seeking alternatives. Lack of health insurance also reduces compliance because the costs are borne out-of-pocket [11]. Rural patients have difficulty accessing healthcare services due to long distances, high transportation costs, and limited facilities [13], [19]. Low education levels result in low patient health literacy, making it difficult to understand the importance of treatment [29], [16]. In addition, in some cultures, health care expenses are not a priority compared to family needs [29]. Transportation barriers [19] and job instability also make it difficult for patients to have regular check-ups or buy medication [16].

Factors Inhibiting the Health System

Health system barriers include structural and service constraints, including inconsistent drug availability that requires patients to purchase from pharmacies at high prices [8], [5], [13]. Short consultation times due to high workloads reduce education about hypertension therapy [8], [10]. Ineffective communication makes patients reluctant to ask questions [8], [10], and a lack of ongoing education reduces patient understanding [10], [11]. During the COVID-19 pandemic, primary health care services were suboptimal, resulting in patients losing access to blood pressure monitoring [11]. Geographical barriers such as distance and high transportation costs also hamper routine check-ups [13], as well as infrastructure limitations, such as blood pressure measuring devices in primary facilities limit therapy evaluation [16]. This scoping review excels in comprehensively mapping barriers to adherence to hypertension therapy from individual, social, economic, cultural, and health system perspectives. The methodology follows the Arksey and O'Malley framework, with literature sources from reputable databases and diverse study contexts. However, its limitation is that it only includes English-language articles from 2020–2025 without an in-depth methodological quality assessment. Consequently, the results of this review are crucial for designing evidence-

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based interventions with a holistic approach to improve adherence and access to services in resource-limited populations.

CONCLUSION

The review results indicate that adherence in hypertensive patients is influenced by various multidimensional barriers. Individual factors such as understanding, health literacy, motivation, therapy fatigue, comorbidities, and physical or cognitive limitations are key challenges. Therapeutic factors include medication side effects, regimen complexity, inconsistent medication availability, and the use of traditional medicine. Other barriers include medical conditions, socioeconomic factors such as income, access to healthcare, education, transportation, and employment, and health system factors such as ineffective communication, limited ongoing education, and low-quality primary care. Therefore, a comprehensive approach is needed through effective education, increased health literacy, improved services and communication, and socioeconomic support to improve patient adherence and quality of life and prevent complications.

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