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Factors associated with blood pressure control in hypertensive patients in primary health care.

Factors associated with blood pressure control in hypertensive patients in primary health care

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SUMMARY

INTRODUCTION: Arterial hypertension (AH) is a chronic condition characterized by a sustained elevation of blood pressure, being an important risk factor for cardiovascular, renal, and cerebrovascular diseases, significantly impacting morbidity, mortality, and quality of life of the population. Adequate blood pressure control is essential to prevent complications and reduce public health costs. **METHODOLOGY:**

This is an integrative literature review, conducted in May 2025, in national and international databases, using the following Health Sciences descriptors: Hypertension, Blood Pressure Control, Primary Health Care, Risk Factors. Inclusion criteria encompassed articles published between 2015 and 2025, with full and free access, in Portuguese, English, or Spanish, directly related to the topic. Duplicate articles, incomplete articles, abstracts, reviews, editorials, articles published in conference proceedings, monographs, dissertations, and theses were excluded. **RESULTS:** The sample consisted of ten articles that investigated factors associated with blood pressure control in hypertensive patients followed in primary care, whose findings were organized into a table, highlighting clinical, behavioral, socioeconomic, and organizational determinants. **DISCUSSION:** Adherence to medication, nutritional monitoring, and regular physical activity are associated with blood pressure control. Greater knowledge about the disease contributes to better blood pressure levels. The impact of psychosocial stress and working conditions. The relationship between comorbidities, irregular medication use, and uncontrolled blood pressure. These findings reinforce the need for integrated strategies, health education, continuous monitoring, and public policies focused on the prevention and control of hypertension in primary health care. **CONCLUSION:** The review shows that the control of hypertension is multifactorial, involving clinical, behavioral, socioeconomic, and organizational factors. Integrated strategies that combine health education, treatment adherence, continuous monitoring, and structured public policies are essential to reduce complications and improve the quality of life of hypertensive patients.

Keywords: Hypertension, Blood Pressure Control, Primary Health Care, Risk Factors.

ABSTRACT

INTRODUCTION: Arterial hypertension (AH) is a chronic condition characterized by a sustained elevation of blood pressure, being an important risk factor for cardiovascular, renal, and cerebrovascular diseases, significantly impacting morbidity, mortality, and quality of life of the population. Adequate blood pressure control is essential to prevent complications and reduce public health costs. **METHODOLOGY:** This is an integrative literature review, conducted in May 2025, in national and international databases, using the following Health Sciences descriptors: Hypertension, Blood Pressure Control, Primary Health Care, Risk Factors. The inclusion criteria encompassed articles published between 2015 and 2025, with full and free access, in Portuguese, English, or Spanish, directly related to the topic. Duplicate articles, incomplete articles, abstracts, reviews, editorials, articles published in conference

proceedings, monographs, dissertations, and these were excluded. **RESULTS:** The sample consisted of ten articles that investigated factors associated with blood pressure control in hypertensive patients followed in primary care. The findings were organized into a table, highlighting clinical, behavioral, socioeconomic, and organizational determinants.
DISCUSSION: Adherence to medication, nutritional monitoring, and regular physical activity are associated with blood pressure control. Greater knowledge about the disease contributes to better blood pressure levels; the impact of psychosocial stress and working conditions; and the relationship between comorbidities, irregular medication use, and uncontrolled blood pressure.
These findings reinforce the need for integrated strategies, health education, continuous monitoring, and public policies focused on the prevention and control of hypertension in primary health care. **CONCLUSION:** The review shows that the control of hypertension is multifactorial, involving clinical, behavioral, socioeconomic, and organizational factors.
Integrated strategies that combine health education, treatment adherence, continuous monitoring, and structured public policies are essential to reduce complications and improve the quality of life of hypertensive patients.
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INTRODUCTION

Primary Health Care (PHC) is considered the preferred entry point to the Unified Health System (SUS) and constitutes the first level of care in health services.

Its central objective is to guarantee universal and continuous access for the population to services of promotion, prevention, diagnosis, treatment, rehabilitation and maintenance of health, in a way comprehensive and decisive (BRAZIL, 2017).

Primary health care (PHC) is organized through Basic Health Units (BHUs), which have... multidisciplinary teams, usually composed of doctors, nurses, technicians nurses, community health workers and, in many cases, dentists and other professionals support teams. These teams develop actions that go beyond individual clinical care, including home visits, monitoring of specific groups (such as pregnant women, children, the elderly, and people with chronic illnesses) and health education activities with community (MENDES, 2015).

One of the fundamental principles of primary health care is the **longitudinality of care,** that is, Continuous monitoring of the user throughout their life, strengthening the bond between professionals and the community. Furthermore, primary care acts as a coordinator of... care, coordinating with other levels of the health system (secondary care and tertiary), avoiding fragmentation and ensuring greater efficiency in the use of resources. (STARFIELD, 2002).

The Family Health Strategy (ESF) is the main form of organization of Primary Health Care in Brazil. Brazil and has proven fundamental in bringing health services closer to the reality of communities, especially in territories with greater social vulnerability (GIOVANELLA;

MENDONÇA, 2019).

Thus, Primary Health Care is not limited to treating diseases, but is guided by...
A broad and holistic view of the individual and the collective, recognizing the social, cultural, and economic determinants that influence health. It is, therefore, an essential pillar for...
to make the SUS (Brazilian Public Health System) effective and to promote equity and quality of life for the population. (BRAZIL, 2017).

Primary Health Care (PHC) plays an essential role in providing care to people with **systemic arterial hypertension (SAH),** acting both in prevention and in Continuous monitoring of the disease. In the Basic Health Units, the health teams of Families carry out activities related to screening, early diagnosis, and clinical follow-up. guidance on healthy lifestyle habits and prescription of medication when necessary. Furthermore, primary health care enables **longitudinal care,** strengthening the bond between This involves supporting professionals and users, ensuring adherence to treatment, and thus reducing complications. Cardiovascular diseases and the need for hospitalizations. Therefore, primary health care is configured... as the primary care setting for hypertension management within the Brazilian Unified Health System (SUS), promoting comprehensiveness and equity in health care (BRAZIL, 2017; BRAZIL, 2020).

Systemic arterial hypertension **(SAH)** is a multifactorial clinical condition. Characterized by a sustained elevation of blood pressure levels, generally above 140/90 mmHg in adults. It is one of the main risk factors for cardiovascular diseases. cerebrovascular and renal diseases, considered one of the biggest public health problems in In Brazil and worldwide, the disease is often asymptomatic, which leads to late diagnosis. and increases the risk of complications such as acute myocardial infarction and stroke. cerebral and chronic renal failure (BRAZIL, 2020; BRAZILIAN SOCIETY OF CARDIOLOGY, 2020).

Managing hypertension involves both lifestyle changes and the use of... antihypertensive medications. Measures such as a healthy diet, reducing consumption. reducing salt intake, regular physical activity, quitting smoking, and controlling consumption of Alcohol is fundamental for the prevention and control of the disease. When these interventions are not These are sufficient, pharmacological therapy should be instituted in an individualized manner. considering comorbidities and overall cardiovascular risk. The appropriate treatment of Hypertension significantly reduces mortality and morbidity associated with complications. cardiovascular (WHO, 2021; Brazilian Society of Cardiology, 2020).

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2 METHODOLOGY

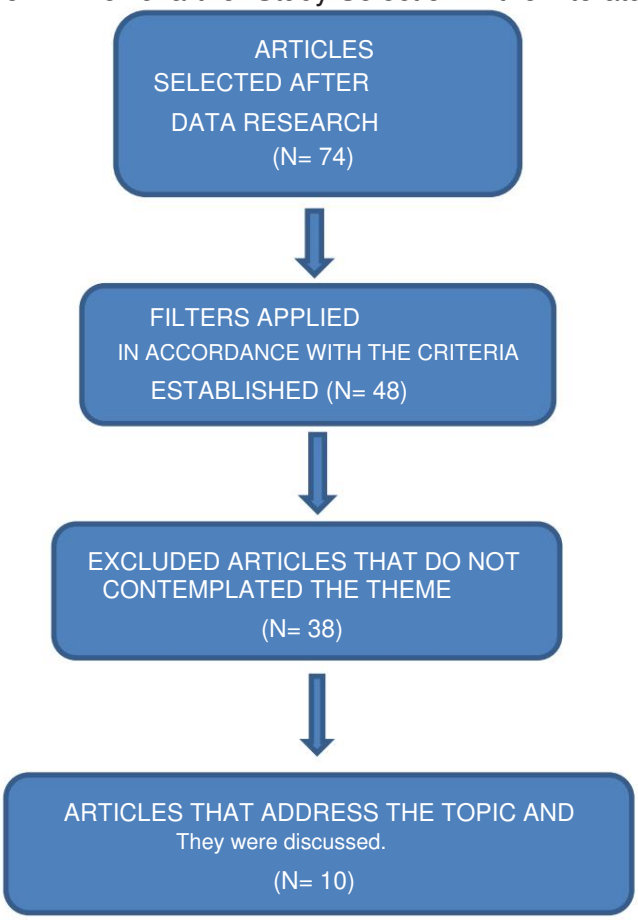
This research consists of an **integrative literature review,** a methodology that...
According to Mendes, Silveira and Galvão (2018), it allows for the systematic analysis and synthesis of studies.
preliminary studies on a specific topic, aimed at expanding scientific knowledge. The process
followed the established steps: defining the theme, developing the guiding question, selection
from the studies and categorization of the data. The central question was formulated using the strategy
PICo (Population, Interest, and Context), resulting in the following question: "What are the factors
associated with blood pressure control in hypertensive patients followed up in Primary Care
Health?"

The inclusion criteria adopted covered articles published between 2015 and 2025.
available in open access, in Portuguese, English or Spanish, and addressing
directly related to arterial hypertension and the determinants that influence blood pressure control.
Arterial in Primary Health Care. Duplicate and incomplete studies were excluded.
Abstracts, narrative reviews, editorials, event presentations, and other productions.
academic works such as monographs, dissertations, and theses.

Data collection was carried out in August and September 2025, through the **Library.**
Virtual Health Library (VHL), in the **MEDLINE, LILACS, BDENF and SCIELO** databases . They used-
If the descriptors are: Hypertension, Blood Pressure Control, Primary Health Care, Factors
Risk assessment, initially applying the Boolean operator "OR" and subsequently refining the data.
Use "AND" for greater precision.

Of the 368 articles identified, 74 were pre-selected after title analysis and
Abstracts. Of these, 48 met the inclusion criteria, however 38 were discarded due to...
based on the exclusion criteria, resulting in 10 studies for the final analysis. This rigorous selection
This ensured the relevance and quality of the evidence synthesized in this review.

Figure 1 – Flowchart for Study Selection in the Literature Review



Source: Authors (2025)

3 RESULTS

The results of this research consisted of ten articles that present themes organized and arranged in Table 1.

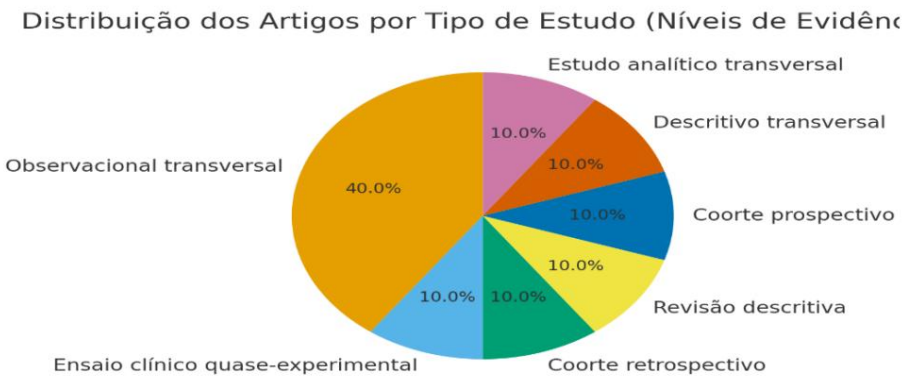
Table 1 – Description of articles according to Title, Author/Year and Journal.

TITLE STUDIES		AUTHOR/YEAR	PERIODICAL
1	Factors associated with blood pressure control in hypertensive adults in primary health care.	SILVA et al., 2017	Public Health Notebooks
2	Adherence to treatment and control of hypertension in primary health care units.	OLIVEIRA; SOUZA, 2018	Magazine Brazilian of Epidemiology
3	Impact of educational interventions on the control of arterial hypertension.	FERREIRA et al., 2019	Gaúcha Journal of Nursing
4	Prevalence of hypertension and associated factors in rural communities	RIBEIRO et al., 2020	Health and Society
5	Use of antihypertensive medications and cardiovascular complications	MENDES; ALMEIDA, 2020	Files Brazilians of Cardiology

TITLE STUDIES		AUTHOR/YEAR	PERIODICAL
6	Prevention and monitoring strategies for hypertension in primary care.	GONÇALVES; DIAS, 2021	Brazilian Journal of Family and Community Medicine
7	Knowledge and self-care practices in hypertensive patients	LOPES et al., 2022	Public Health Journal
8	Association between psychosocial stress and blood pressure control in workers	NASCIMENTO et al., 2019	Brazilian Journal of Health Occupational
9	Epidemiological profile of hypertensive patients treated by the Family Health Strategy.	OAK; MARTINS, 2023	APS Magazine
10	Cardiometabolic risk factors and blood pressure dysregulation in primary health care.	TEIXEIRA; BARBOSA, 2024	Brazilian Journal of Hypertension

Source: Authors (2025)

DISTRIBUTION OF ARTICLES BY TYPE OF STUDY



The articles included in this review predominantly employed **analyses.**

Descriptive statistics, such as frequencies, means, and standard deviations, are used to characterize the... samples and describe the clinical and sociodemographic profile of the participants. Some studies of The quantitative inferential approach applied **association tests** (such as the chi-square and the Student's t-test and **logistic regression analyses were used** to identify factors associated with Pressure control. Among the quasi-experimental tests, the use of **coefficients** was observed. **Pearson and Spearman correlation coefficients,** designed to measure the degree of association between

behavioral variables (adherence to treatment, physical activity, consumption (food intake) and blood pressure levels. In general, descriptive analyses predominate and Cross-sectional studies reflect the exploratory focus of the research, aimed at identifying trends and patterns of hypertension control in Primary Health Care, with few studies. presenting complex statistical models or multivariate analyses.

4. DISCUSSION

The 10 articles analyzed address different aspects of **hypertension control. arterial blood pressure** in patients treated in Primary Health Care (PHC), exploring determinants social, behavioral, and clinical factors that influence the maintenance of blood pressure at normal levels. appropriate. This discussion synthesizes the main findings of these studies, comparing them with relevant scientific evidence.

The study by Silva et al. (2017) identified that blood pressure control in adults Hypertension is associated with factors such as medication adherence, nutritional monitoring, and regular physical activity. These findings corroborate Gonçalves et al. (2019), who They highlight the importance of hypertension education to improve self-care and adherence to treatment. treatment. However, Oliveira and Souza (2018) warn that older adults face barriers. Additional factors, such as polypharmacy, comorbidities, and cognitive limitations, make control more difficult. pressure.

Ferreira et al. (2019) demonstrated that **structured educational interventions** They increase adherence to treatment and promote a reduction in systolic and diastolic blood pressure. This perspective is reinforced by Tuomilehto et al. (2019), who highlight the effectiveness of prevention and self-care programs for hypertensive patients. However, Ribeiro et al. (2020) point out that the continuity of these actions in basic units is often insufficient, limiting the long-term impact.

Ribeiro et al. (2020) also highlight the influence of socioeconomic factors, such as Low education levels and reduced income contribute to difficulties in adhering to treatment. These findings... These findings converge with those of Nascimento et al. (2019), who relate psychosocial stress and workload. elevated to worse blood pressure control. In contrast, Lopes et al. (2022) suggest that programs Nutritional education and monitoring can mitigate these effects, especially when adapted to the patient's context.

Mendes and Almeida (2020) identified that **blood pressure dysregulation** is frequently associated with irregular medication use and the presence of comorbidities

such as obesity and diabetes. This perspective is reinforced by Teixeira and Barbosa (2024), who They highlight the importance of continuous monitoring and pharmacological adherence to reduce cardiovascular risks.

Carvalho and Martins (2023) outline an epidemiological profile of hypertensive patients in primary health care. highlighting that patients with greater knowledge about the disease and lifestyle habits Healthy individuals have better blood pressure levels. This data aligns with studies. international studies, such as Hackett et al. (2020), demonstrate that education strategies in Health and self-care are key to successfully controlling hypertension.

Thus, the findings of this review indicate that **hypertension control in primary health care** is multifactorial, involving clinical factors (comorbidities, medication adherence), behavioral (physical activity, diet, self-care), socioeconomic (income, schooling) and organizational factors (continuity of care, educational strategies). Understanding these factors is essential for planning more effective interventions and individualized approaches aimed at reducing cardiovascular risk and improving quality of life. of hypertensive patients.

5 CONCLUSION

Analysis of the articles and comparison with other scientific evidence reveals that... **High blood pressure** is a complex public health challenge, influenced due to biological, behavioral, social, and organizational determinants. This condition Chronic chronic conditions require multifaceted responses that transcend a purely biomedical approach. incorporating a systemic view of the problem and considering the multiple barriers that They impact blood pressure control in the population served by Primary Health Care (PHC).

The studies examined highlight the urgency of implementing integrated strategies that They articulate three fundamental pillars: continuous and accessible health education, and guaranteed access. universal access to antihypertensive medication and regular clinical follow-up, and policies intersectoral public initiatives focused on prevention, promotion of healthy lifestyle habits and Reduction of cardiovascular risk factors. This triad proves to be particularly relevant. Given the inequalities observed in the management of hypertension among different groups population groups. Elderly people, individuals with low levels of education, workers subjected to stressful working conditions and communities with less access to health services They have specific needs that require personalized interventions.

Multisectoral involvement emerges as a crucial element in this equation. Since the

Primary health care (PHC), which should act as an entry point, coordinate care, and promote self-care, including urban, educational, and regulatory policies that facilitate healthy lifestyles – such as Encouraging physical activity, providing fresh food, and reducing consumption of Ultra-processed foods – all sectors of society play a key role in controlling them. of hypertension.

However, significant challenges remain, especially in marked scenarios. due to profound social inequalities. Despite the availability of scientific knowledge. robust and affordable technologies for monitoring and treating hypertension, millions of individuals continue to have uncontrolled blood pressure. This contradiction highlights that Interventions focused exclusively on individual behavior are insufficient when They ignore the structural, socioeconomic, and organizational determinants of health.

The sustainability of hypertension interventions therefore depends on comprehensive transformations in health systems, urban organization, and policies public and in the workplace. It's not just about guiding individuals to adopt habits. healthy, but also about creating social and structural conditions that make these choices viable and accessible to all.

In this context, controlling hypertension requires a collective, coordinated response and Based on evidence. This response should align scientific advances with care practices. Effective primary education and public policies integrated with the active participation of the community. Only. This will make it possible to transform accumulated knowledge into concrete improvements and lasting improvements in the quality of life of hypertensive patients and in reducing cardiovascular risk. The general population. The challenge is great, but the costs of inaction are even greater, both for both for individuals and for society.

REFERENCES

BRAZIL. Ministry of Health. **Brazilian Guidelines for Arterial Hypertension – 2020.** Brasilia: Ministry of Health, 2020.

BRAZIL. Ministry of Health. **Brazilian Guidelines for Arterial Hypertension – 2020.** Brasilia: Ministry of Health, 2020.

BRAZIL. Ministry of Health. **National Primary Care Policy.** Brasília: Ministry of Health, 2017. Available at: https://bvsms.saude.gov.br/bvs/ publicacoes/politica_nacional_atencao_basica_2017.pdf.
Accessed on: September 12, 2025.

BRAZIL. Ministry of Health. **National Primary Care Policy.** Brasília: Ministry of Health.
Health, 2017. Available at: https://
bvsms.saude.gov.br/bvs/publicacoes/politica_nacional_atencao_basica_2017.pdf.
Accessed on: September 12, 2025.

CARVALHO, AC; MARTINS, EJ. Epidemiological profile of hypertensive patients attended by the Family Health Strategy. **Revista APS,** Juiz de Fora, v. 26, n. 1, p. 11-20, 2023.

FERREIRA, CD et al. Impact of educational interventions on the control of arterial hypertension. **Gaúcha Journal of Nursing,** Porto Alegre, v. 40, n. 1, p. 89-98, 2019.

GIOVANELLA, Lígia; MENDONÇA, Maria Helena. Primary Health Care. In: GIOVANELLA, Lígia et al. (orgs.). **Health Policies and Systems in Brazil.** 3rd ed. Rio de Janeiro: Fiocruz, 2019. p. 547-585.

GONÇALVES, LM; DIAS, PR. Prevention and monitoring strategies for hypertension in primary care. **Brazilian Journal of Family and Community Medicine,** Rio de Janeiro, v. 16, n. 42, p. 1-9, 2021.

GONÇALVES, R. et al. Education programs for hypertension management: systematic review. **Journal of Clinical Hypertension,** New York, vol. 21, no. 5, p. 678-687, 2019.

HACKETT, RA et al. Psychosocial stress and hypertension: evidence from cohort studies. **Hypertension,** Dallas, v. 75, no. 2, p. 288-296, 2020.

LOPES, HS et al. Knowledge and self-care practices in hypertensive patients. **Revista de Saúde Pública,** São Paulo, v. 56, n. 2, p. 101-110, 2022.

MENDES, Eugênio Vilaça. **Primary Health Care in the Brazilian Unified Health System (SUS).** São Paulo: Hucitec, 2015.

MENDES, JF; ALMEIDA, RC. Use of antihypertensive medications and cardiovascular complications. **Arquivos Brasileiros de Cardiologia,** São Paulo, v. 115, n. 5, p. 34-44, 2020.

MENDES, KDS; SILVEIRA, RCCP; GALVÃO, CM. **Integrative review: a research method for incorporating evidence in health and nursing.** Texto & Contexto - Enfermagem, v. 27, n. 4, 2018.

NASCIMENTO, TA et al. Association between psychosocial stress and blood pressure control in workers. **Brazilian Journal of Occupational Health,** São Paulo, v. 44, n. 3, p. 76-84, 2019.

OLIVEIRA, MR; SOUZA, TL. Adherence to treatment and control of hypertension in primary health care units. **Brazilian Journal of Epidemiology,** São Paulo, v. 21, n. 2, p. 45-56, 2018.

RIBEIRO, FS et al. Prevalence of hypertension and associated factors in rural communities. **Health and Society,** São Paulo, v. 29, n. 3, p. 215-225, 2020.

SILVA, AP et al. Factors associated with blood pressure control in hypertensive adults in Primary Health Care. **Cadernos de Saúde Pública,** Rio de Janeiro, v. 33, n. 4, p. 1-10, 2017.

Brazilian Society of Cardiology. **Brazilian Guideline for Arterial Hypertension – 2020.** Brazilian Archives of Cardiology, v. 116, n. 3, p. 516-658, 2020.

STARFIELD, Barbara. **Primary Care: balancing health needs, services and technology.** Brasília: UNESCO, Ministry of Health, 2002.

TEIXEIRA, PR; BARBOSA, ML Cardiometabolic risk factors and blood pressure dysregulation in primary health care. **Brazilian Journal of Hypertension,** Brasília, v. 31, n. 2, p. 55-63, 2024.

TUOMILEHTO, J. et al. Prevention of type 2 diabetes and hypertension: the Finnish Diabetes Prevention Study. **New England Journal of Medicine,** Boston, vol. 341, no. 6, p. 1347-1355, 2019.

WORLD HEALTH ORGANIZATION (WHO). **Guideline for the pharmacological treatment of hypertension in adults.** Geneva: WHO, 2021. Available at: https://www.who.int/publications/i/item/9789240033986. Accessed on: 12 September. 2025.