Blood Pressure Uncontrol in Hypertensive Adults in a Municipality of Chapada Diamantina, Bahia

Descontrole Pressórico em Adultos Hipertensos em um Município da Chapada Diamantina, Bahia

Descontrol Presorico en Adultos Hipertensos en un Municipio de la Chapada Diamantina, Bahía

RESUMO

Objetivo: Estimar a prevalência e os fatores associados ao descontrole pressórico em adultos hipertensos. **Método:** Estudo transversal realizado com 112 indivíduos cadastrados na Estratégia Saúde da Família do município de Mucugê, Bahia. Foram coletados dados sociodemográficos, hábitos de vida, problemas de saúde, sofrimento mental, qualidade do sono, medidas antropométricas e pressão arterial. A variável dependente foi o descontrole pressórico (pressão arterial sistólica ≥ 140 mmHg e/ou pressão arterial diastólica ≥ 90 mmHg). Utilizou-se Razão de Prevalência como medida de associação e Intervalo de Confiança de 95% como medida de inferência estatística. **Resultados:** A prevalência de descontrole pressórico foi de 66,1% e esteve associada ao sexo masculino, idade igual ou inferior a 60 anos, ser tabagista e usuário de bebida alcoólica, porém sem significância estatística. **Conclusão:** Observou-se elevada prevalência de descontrole pressórico e associação com fatores modificáveis. Sugere-se realização de estudos sobre adesão ao tratamento na população estudada.

DESCRITORES: Hipertensão arterial; Pressão arterial; Estratégia saúde da família; Atenção primária à saúde.

ABSTRACT

Objective: To estimate the prevalence and factors associated with uncontrolled blood pressure in hypertensive adults. **Method:** A cross-sectional study was conducted with 112 individuals registered in the Family Health Strategy of the municipality of Mucugê, Bahia. Sociodemographic data, lifestyle habits, health problems, mental distress, sleep quality, anthropometric measurements, and blood pressure were collected. The dependent variable was uncontrolled blood pressure (systolic blood pressure ≥ 140 mmHg and/or diastolic blood pressure ≥ 90 mmHg). The prevalence ratio was used as a measure of association and a 95% confidence interval as a measure of statistical inference. **Results:** The prevalence of uncontrolled blood pressure was 66.1% and was associated with male gender, age 60 years or younger, smoking, and alcohol consumption, but without statistical significance. **Conclusion:** A high prevalence of uncontrolled blood pressure and association with modifiable factors was observed. Further studies on treatment adherence in the studied population are suggested.

DESCRIPTORS: Hypertension; Blood pressure; Family health strategy; Primary health care.

RESUMEN

Objetivo: Estimar la prevalencia y los factores asociados al descontrol de la presión arterial en adultos hipertensos. **Método:** Estudio transversal realizado con 112 individuos inscritos en la Estrategia de Salud Familiar del municipio de Mucugê, Bahía. Se recopilaron datos sociodemográficos, hábitos de vida, problemas de salud, sufrimiento mental, calidad del sueño, medidas antropométricas y presión arterial. La variable dependiente fue el descontrol de la presión arterial (presión arterial sistólica ≥ 140 mmHg y/o presión arterial diastólica ≥ 90 mmHg). Se utilizó la razón de prevalencia como medida de asociación y el intervalo de confianza del 95 % como medida de inferencia estadística. **Resultados:** La prevalencia de descontrol de la presión arterial fue del 66,1 % y se asoció con el sexo masculino, la edad igual o inferior a 60 años, el tabaquismo y el consumo de alcohol, aunque sin significación estadística. **Conclusión:** Se observó una alta prevalencia de descontrol de la presión arterial y una asociación con factores modificables. Se sugiere realizar estudios sobre la adherencia al tratamiento en la población estudiada.

DESCRIPTORES: Hipertensión arterial; Presión arterial; Estrategia de salud de la familia; Atención primaria de salud.

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INTRODUCTION

The rapid transformations that have occurred in contemporary societies have led to significant changes in individuals' lifestyles, contributing to the emergence and worsening of chronic noncommunicable diseases, such as hypertension (HTN).

HA is a chronic disease defined by persistently high blood pressure (BP) values, which, if not properly controlled, can cause systemic repercussions due to structural and/or functional damage to target organs. In addition, HA is the main modifiable risk factor for cardiovascular and cerebrovascular events. Despite its simple diagnosis and effective treatments, it is still an underestimated disease, with low blood pressure control rates, which underestimates its impact on public health[(1,2)].

The lack of information on the prevalence, diagnosis, treatment, and control of AH in developing countries, especially in small cities, is concerning, as this information is essential for monitoring and implementing effective strategies for the prevention and control of this condition. The literature shows that improved blood pressure control is essential for reducing serious clinical events, as sustained elevation of systolic blood pressure (SBP) and diastolic blood pressure (DBP) is the main independent and modifiable risk factor for stroke, coronary artery disease, heart failure, and peripheral vascular insufficiency[(3)]. Adequate control of blood pressure levels significantly reduces the onset of cardiovascular complications[(4)].

According to estimates by the World Health Organization (WHO), approximately 1.4 billion adults aged 30 to 79 worldwide live with hypertension, predominantly in low- and middle-income countries. Worryingly, it is estimated that 44.0% of these individuals are unaware of their hypertensive status, and less than half (44.0%) receive adequate diagnosis and treatment. In addition, only 23.0%, or one in five adults, have effective control of their blood pressure levels[(5)].

Characterized as a serious and persistent health problem, AH is associated with uncontrolled blood pressure, defined as uncontrolled hypertension in individuals previously diagnosed and undergoing treatment (pharmacological and/or non-pharmacological), with systolic blood pressure values ≥ 140 mmHg and/or diastolic blood pressure ≥ 90 mmHg. Data from *the World Health Organization* (WHO) for 2023 report that globally, approximately 30.0% of individuals have systolic blood pressure ≥ 160 mmHg and/or diastolic blood pressure ≥ 100 mmHg, These values are above the threshold for hypertension (SBP ≥ 140 mmHg and/or DBP ≥ 90 mmHg) and indicate the need for monitoring[(6)] .

Furthermore, it is worth noting that AH has several risk factors, such as: gender, age, ethnicity, and genetic predisposition (non-modifiable factors); use of certain medications or drugs, overweight/obesity, high sodium and low potassium intake, physical inactivity, excessive alcohol consumption, psychosocial factors, and sleep disorders (modifiable factors); in addition to environmental factors[(1,2,5,6,7)].

In this context, it is important to investigate the factors associated with uncontrolled blood pressure in adults undergoing treatment for AH, since these constitute a major obstacle to achieving adequate blood pressure control. Thus, it is essential to highlight that uncontrolled blood pressure, by directly influencing blood pressure levels, can exacerbate hypertension and increase the risk of cardiovascular complications[(8)].

Thus, effective management of hypertension in primary health care requires accurate diagnosis, with

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screening of adult patients, immediate initiation of treatment for individuals with confirmed high blood pressure (≥ 140 and/or 90 mmHg), periodic monitoring of individuals with high blood pressure, and standardized, accessible, free treatment in each unit or area so that, if necessary, therapeutic intervention can be adjusted[5] .

Knowledge about uncontrolled blood pressure and associated factors in cities in the interior of Brazil, especially in the interior of the state of Bahia, can contribute to the formulation of effective health policies aimed at the prevention and control of AH[8] . Thus, the present study aims to estimate the prevalence and factors associated with uncontrolled blood pressure in hypertensive adults undergoing antihypertensive treatment and registered in the Family Health Strategy (ESF) in the municipality of Mucugê, Bahia.

METHOD

This is a cross-sectional, sample study derived from the parent project "Health Surveillance Proposal for the Detection of Minor Mental Disorders, Diabetes Mellitus, and Hypertension in Mucugê, Bahia," funded by the Bahia State Research Support Foundation (FAPESB), Grant Agreement SUS0008/2021. The research was conducted in the municipality of Mucugê, Bahia, from October to December 2021 and March 2022, by researchers from the Situation Room and Epidemiological and Statistical Analysis (SSAEE) at the State University of Feira de Santana (UEFS). The present study was subsequently designed as a result of the identification of analytical potential in the collected data.

A total of 337 adults (aged ≥ 18 years) registered in the Family Health Strategy were studied, selected by systematic and stratified random sampling, according to the distribution of families in the micro-areas of the Family Health Units (USF), ensuring the same population representativeness of the municipality. For this study, only individuals who self-reported being hypertensive and using antihypertensive medication were included, totaling 112 participants. Those without self-reported hypertension and/or who did not use antihypertensive medication were excluded.

Data collection was performed by medical students from the State University of Feira de Santana, previously trained to read and collect signatures on the Free and Informed Consent Form (FICF), apply the data collection instrument, and perform anthropometric measurements through home visits, accompanied by Community Health Agents (ACS) and supervised by professors/researchers from UEFS. A standardized questionnaire was used that included sociodemographic information, lifestyle habits, health problems (reported hypertension and diabetes mellitus), mental distress (identified by *the Self-Reporting Questionnaire*), sleep quality (measured by *the Mini Sleep Questionnaire*), anthropometric measurements (weight, height, and waist circumference), and blood pressure measurement.

Anthropometric measurements were collected in a standardized manner. Weight was measured using a portable analog scale with an accuracy of 1 kg (G-Tech), with the individual barefoot and wearing light clothing. Height was measured using a portable stadiometer *(Personal Caprice Sanny* – ES2060) with an accuracy of 1 cm, on a flat surface and with the participant in an upright position, arms alongside the body and looking at the horizon. Waist circumference was measured using a non-elastic tape measure (made of *fiberglass*) with a capacity of up to 150 cm and an accuracy of 1 cm, placed at the midpoint between the iliac crest and the lower edge of the costal margin[9] .

In order to calculate the Body Mass Index (BMI), a new variable was generated from the result of dividing each measured weight by the square of the height. The standardization and measurement of anthropometric measurements were performed in accordance with the recommendations of the Laboratory for Nutritional Assessment of Populations, Department of Nutrition, University of São Paulo[(9)].

To measure blood pressure, automatic oscillometric wrist blood pressure monitors (Connect HEM-6323T automatic digital oscillometric sphygmomanometer) were used, with two measurements taken at least five minutes apart. In addition, the following procedures and/or conditions were also considered: participants were asked to rest for 5 minutes in a quiet environment, instructed not to talk during the measurement, and asked not to engage in physical exercise or consume tobacco or alcohol in the 30 minutes prior to the measurements; sitting position, with legs uncrossed, feet flat on the floor, back leaning against the chair and relaxed; left arm relaxed, resting on a table at heart level; palm facing up and bladder empty. The cuff used was properly compatible with the circumference of the wrist[(9)]. In this study, individuals previously diagnosed and undergoing treatment with SBP ≥ 140 mmHg and/or DBP ≥ 90 mmHg[(1,6,7)] were considered to have uncontrolled blood pressure.

The *Self Report* Questionnaire (SRQ-20) was used to identify individuals with mental distress (Minor Psychiatric Disorders/MPD). The SRQ-20 is a questionnaire developed for use in psychiatric morbidity studies in primary health care institutions in developing countries. The SRQ-20 consists of 20 questions with binary answers, yes (1) or no (0), so the final

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score can range from 0 to 20 points. In this study, individuals with a score equal to or greater than 7 points were considered to have mental distress.

The *Mini-Sleep Questionnaire* (MSQ) was used to assess sleep quality. This instrument consists of ten items, has been translated into Brazilian Portuguese, and assesses subjective sleep quality, making it useful for screening sleep disorders in populations[((11))]. Insomnia is assessed by four questions: difficulty falling asleep, waking up in the middle of the night, waking up early in the morning, and use of hypnotic medication (MSQ insomnia). To assess hypersomnia, the questions include feeling tired upon waking, falling asleep during the day, excessive daytime sleepiness, morning headaches, snoring, and excessive movements during sleep (MSQ hypersomnia).

Responses are given on a seven-point *Likert* scale, ranging from 1 (never) to 7 (always). Thus, the score ranges from 10 to 70 points, and the higher the score, the more sleep problems. From 10 to 24 points, good sleep quality; 25 to 27 points, mild sleep difficulties; 28 to 30 points, moderate sleep difficulties; and ≥ 31 points, severe sleep difficulties. The total score provides an estimate of sleep quality and the presence or absence of sleep disorders. In this study, individuals with a score greater than or equal to 25 points (MSQ score ≥ 25 points) were considered to have sleep problems[(11)] .

The dependent variable was uncontrolled blood pressure, and the independent variables included: age (< 60 years and ≥ 60 years), gender (male and female), education (low education—illiterate, incomplete primary education, and high education—complete primary education, incomplete secondary education, complete secondary education, higher education), family income (low income—≤ 1 minimum wage and high income—> 1 minimum wage), skin color (black/brown and others—white/indigenous/yellow), marital status (with partner—married, stable union, and without partner—single, separated, widowed), alcohol consumption (yes and no), smoking (yes – smoker and no – never smoked, ex-smoker), sleep quality (with sleep problems – *Mini Sleep Questionnaire* score ≥ 25 points and without sleep problems – *Mini Sleep Questionnaire* score < 25 points), mental distress (present – SRQ score ≥ 7 points and absent – SRQ score < 7 points), overweight/obesity (yes – BMI ≥ 25 kg/m² and no – BMI < 25 kg/m²), and reported diabetes mellitus (DM) (yes and no).

The data were digitized using the double-entry technique, with the use of *EpiData* version 3.1 and *Statistical Package for Social Science* (SPSS) version 17.0 *for Windows*. For descriptive analysis, the absolute and relative frequencies of categorical and numerical variables were calculated. For bivariate analysis, the Prevalence Ratio (PR) was used as a measure of association and the 95% Confidence Interval (95% CI) as a measure of statistical inference.

ETHICAL ASPECTS

The project was approved by the UEFS Research Ethics Committee (CAAE: 15618119.7.0000.0053). All participants were duly informed of the research objectives and consented to participate by reading and signing the Free and Informed Consent Form, following the recommendations of Resolution No. 466, dated December 12, 2012[(12)].

RESULTS

Among the 112 participants, 66.1% (74) had uncontrolled blood pressure. Most of the study participants were female (64.3%), aged 60 years or older (54.5%), with a partner (59.8%), black or brown (78.6%), with low family income (60.7%), and low education (83.9%) (Table 1). It was also found that 90.2% and 83.0% of the sample studied reported being non-smokers and not consuming alcohol, respectively, 70.1% were overweight/obese, 60.7% were identified with sleep problems, 34.8% with mental distress (MD), and 36.6% reported having diabetes mellitus (Table 1).

Table 1 - Sociodemographic variables, lifestyle habits, anthropometric measurements, and health conditions of a sample of hypertensive patients undergoing antihypertensive treatment registered with the ESF in the municipality of Mucugê, Bahia, 2022.

Variables	Frequency N1	Relative Frequency %
Gender		
Female	72	64,3%
Male	40	35,7%
Age		
≥ 60 years	61	54,5%
< 60 years	51	45,5%

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Marital status		
With partner	67	59,8%
Without partner	45	40,2%
Skin color		
Black/Brown	88	78.6%
Other	24	21,4%
Family income*		
Low income	68	60,7%
High income	44	39,3%
Education		
Low education	94	83,9%
High education	18	16,1%
Smoking		
No	101	90,2%
Yes	11	9,8%
Alcohol consumption		
No	93	83,0%
Yes	19	17,0%
Overweight/Obese		
Yes	75	70,1%
No	32	29,9%
Sleep quality		
With sleep problems	68	60,7%
No Sleep Problems	44	39,3%
Mental Suffering		
Absent	73	65,2%
Present	39	34,8%
Reported diabetes mellitus		
No	71	63,4%
Yes	41	36,6%

1. Valid results, excluding those who did not answer
* Minimum wage for 2021 and 2022
Source: Own elaboration, 2025.

The results revealed a higher prevalence of uncontrolled blood pressure among males (PR = 1.16 – 95% CI 0.89 - 1.51), those under 60 years of age (PR = 1.19 – 95% CI 0.92-1.56), black and brown skin color (PR = 1.29 – 95% CI 0.82-2.03), without reported diabetes mellitus (PR = 1.36 – 95% CI 0.99-1.87), smokers (PR = 1.43 – 95% CI 1.13-1.82), alcohol drinkers (PR = 1.14 – 95% CI 0.84-1.55), no sleep problems (PR = 1.24 – 95% CI 0.96-1.61), no mental distress (PR = 1.26 – 95% CI 0.92-1.72), Tables 2 and 3.

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Table 2 - Prevalence, Prevalence Ratio (PR), and respective 95% Confidence Interval (95% CI) of the association between sociodemographic variables and uncontrolled blood pressure in a sample of hypertensive patients using antihypertensive treatment registered with the Family Health System (ESF) in the municipality of Mucugê, Bahia, 2022.

Variables	BP - Uncontrolled		BP- Controlled		RP[2]	CI[3]
	N1	%	N1	%		
Gender						
Male	29	72,5	11	27,5	1,16	0,89-1,51
Female	45	62,5	27	37,5		
Age						
< 60 years	37	72,5	14	27,5	1,19	0,92-1,56
≥ 60 years	37	60,7	24	39,3		
Marital status						
No partner	30	66,7	15	33,3	1,01	0,77-1,33
With partner	44	65,7	23	34,3		
Skin color						
Black/Brown	60	68,2	28	31,8	1,29	0,82-2,03
Other	10	52,6	09	47,4		
Family income*						
High income	30	68,2	14	31,8	1,05	0,81-1,38
Low income	44	64,7	24	35,3		
Education						
High education	12	66,7	06	33,3	1,01	0,71-1,44
Low education	62	66,0	32	34,0		

1. Valid results excluding those who did not respond
2. PR = Prevalence Ratio
3. CI = Confidence Interval
* Minimum wage for 2021 and 2022
Source: Own elaboration, 2025.

Tabela 3 - Prevalência, Razão de Prevalência (RP) e o respectivo Intervalo de Confiança de 95% (IC-95%) da associação entre as variáveis hábitos de vida, condições de saúde e IMC com o descontrole pressórico de uma amostra de hipertensos em uso de tratamento anti-hipertensivo cadastrados na ESF do Município de Mucugê, Bahia, 2022.

Variables	BP - Uncontrolled		BP- Controlled		RP[2]	CI[3]
	N1	%	N1	%		
Reported diabetes mellitus						
No	52	73,2	19	26,8	1,36	0,99-1,87
Yes	22	53,7	19	46,3		
Smoking						
Yes	10	90,9	01	9,1	1,43	1,13-1,82
No	64	63,4	37	36,6		
Alcohol consumption						
Yes	14	73,7	05	26,3	1,14	0,84-1,55
No	60	64,5	33	35,5		

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Overweight/Obese						
No	22	68,8	10	31,3	1,07	0,80-1,43
Yes	48	64,0	27	36,0		
Sleep quality						
No sleep problems	33	75,0	11	25,0	1,24	0,96-1,61
With Sleep Problems Sleep	41	60,3	27	39,7		
Mental suffering						
Absent	52	71,2	21	28,8	1,26	0,92-1,72
Present	22	56,4	17	43,6		

1. Valid results excluding those ignored
2. PR = Prevalence Ratio
3. CI = Confidence Interval
Source: Own elaboration, 2025.

DISCUSSION

The results of this study revealed a high prevalence (66.1%) of uncontrolled blood pressure among the hypertensive patients studied, a result similar to that observed in other studies[(8,13)] . According to estimates by the World Health Organization (2023), 79.0% of hypertensive patients do not adequately control their blood pressure[(5)] . The rate of uncontrolled BP in this study was higher than that reported in the National Registry of Hypertension Control (LHAR Registry), conducted in five regions of Brazil with 2,540 hypertensive patients, in which the rate of uncontrolled blood pressure was 39.0%[(14)]. Another international study conducted in Shahroud, northeastern Iran, described a prevalence similar to that of this study, 61.7%[(15)] .

The prevalence of uncontrolled blood pressure was higher among males, corroborating the findings of other studies conducted with adults[(13,15,16)] , which found a strong association between male gender and uncontrolled BP. Avelino et al. (2021) state that, in relation to gender, men up to 50 years of age have a higher prevalence of uncontrolled BP when compared to women[(17)]. According to Silva et al. (2023), in the case of the male population, there is less demand for health services, often associated with the belief that being healthy corresponds only to the absence of symptoms. This understanding contributes to a lack of regular monitoring and, consequently, to underreporting and delayed diagnosis of various diseases[(18)]. However, in another national study, a higher prevalence of uncontrolled BP was found among women[(19)].

In relation to age, it was observed that the prevalence of uncontrolled BP was higher among individuals under 60 years of age (72.5%). A similar result was described in another cross-sectional study, which identified a higher prevalence of uncontrolled BP among adults under 60 years of age, contrary to the pattern described in most of the studies consulted, which point to a higher prevalence in people aged 60 years or older[(15,16,19)]. This finding may be related to greater neglect of hypertension control by younger individuals (aged ≤ 60 years), who show lower adherence to therapeutic measures[(20)]. In recent decades, hypertension in young adults (aged 18-24 years) and middle-aged adults (aged 25-44 years) has become an emerging public health problem due to unhealthy lifestyles and low risk perception in these age groups[(21)]. Recent results from studies on the prevalence of chronic noncommunicable diseases (HA, DM, obesity, etc.) have revealed high prevalences of these diseases in individuals under the age of 60. These results may be associated with irregular medical follow-up and inadequate adherence to preventive and therapeutic measures, which contributes to uncontrolled blood pressure, even in individuals without serious comorbidities. These findings reinforce the importance of health education and promotion strategies aimed at this population, which often underestimates the consequences of uncontrolled hypertension[(16,21)].

When investigating the association between skin color and uncontrolled BP, a prevalence of 68.2% was observed among brown and black individuals, corroborating other national investigations[(16,19)]. This result reinforces the influence of ethnic/racial vulnerabilities as a factor associated with uncontrolled blood pressure[(22)]. Several authors consulted point out that racial inequalities have a significant impact on access, adherence, and effectiveness of treatment, since unfavorable socioeconomic conditions, reduced access to health services, low educational attainment, exposure to unhealthy environments, and chronic psychosocial stress act synergistically, hindering the adequate management of disease control and increasing the risk of complications. Thus, public policies aimed at controlling hypertension should prioritize the reduction of these inequalities, focusing on equity, access to treatment, and health education[(22)] .

The analysis of comorbidities revealed that people without a diagnosis

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of diabetes mellitus had a higher prevalence of uncontrolled blood pressure (73.2%). This result contrasts with that reported in most studies, in which control is more difficult in patients with multiple chronic conditions due to the higher burden of associated morbidities and cardiovascular complications[8,13,15,19]). A plausible explanation is that these individuals seek health services more frequently, which favors continuous monitoring and intensification of treatment. Thus, this increased surveillance may contribute to better BP control in this group, since the association between AH and DM is frequent and appears to be bidirectional, i.e., AH may contribute to the development and worsening of DM, and vice versa[1,7]). In addition, there may be reverse causality bias, in which prior diagnosis stimulates lifestyle changes, which influences the distribution of the observed outcomes[23]).

In the present study, the associations observed between alcohol consumption, smoking, and uncontrolled blood pressure corroborate findings from previous studies[8,13]) . It was observed that 90.9% (n=10) of smokers and 73.7% (n=14) of alcohol consumers had uncontrolled BP, which are significant results, even considering the small number of participants. Although common, these behaviors are modifiable factors that impact cardiovascular risk and, consequently, blood pressure control, and reducing or eliminating them can bring significant benefits[1,7]) . However, the small number of smokers may have increased the relative weight of each individual on the total number of cases of uncontrolled blood pressure, not allowing generalizations for the reference population due to the absence of statistical significance.

With regard to sleep problems and mental distress, the results presented differ from the literature consulted, which identified a higher prevalence of uncontrolled blood pressure among individuals with sleep problems and mental distress. Scientific evidence shows that irregular sleep patterns increase the risk of hypertension by 48.0%, regardless of the presence of sleep apnea (OSA). In addition, OSA causes repeated periods of hypoxemia, activating the sympathetic nervous system and increasing heart rate, which results in elevated blood pressure and, consequently, can hinder blood pressure control[24]). Mental distress can promote the onset of chronic noncommunicable diseases and impair treatment adherence, leading to complications associated with risk factors[25]) .

The limitations of this study refer to the impossibility of establishing causal relationships between the variables studied and uncontrolled blood pressure, due to the cross-sectional design adopted, which evaluates the cause and outcome at the same time, not allowing the changes that occurred over time to be monitored. Another limitation concerns the use of self-reporting to estimate the prevalence of hypertension and the use of antihypertensive drugs (reported morbidity), which may have led to an underestimation of the prevalence of hypertension. In addition, data collection at a single point in time makes the outcome susceptible to measurement bias, and the use of dichotomous markers (yes/no) in the questionnaire may have influenced the results obtained, as this approach does not allow for a more consistent assessment of the variables studied.

A strength of this study lies in its pioneering nature and relevance, as it is one of the few studies addressing this topic in a small municipality in rural Brazil. Even in a scenario of broad coverage by the Family Health Strategy and free provision of medications by the Unified Health System, access does not necessarily translate into adequate blood pressure control. This is because factors such as low adherence to treatment, irregular use of medications, and insufficient monitoring by the multidisciplinary team can contribute to uncontrolled blood pressure, even in individuals undergoing pharmacological therapy. In this sense, studies such as this one contribute to the evaluation and improvement of public policies aimed at improving adherence to pharmacological and non-pharmacological treatment and, consequently, blood pressure control in primary care, making it necessary to conduct more robust studies that evaluate adherence to drug treatment and the factors that influence hypertension control in primary care.

CONCLUSION

This study identified a high prevalence of uncontrolled blood pressure in hypertensive patients undergoing pharmacological treatment, registered in the Family Health Strategy of Mucugê , reinforcing the importance of controlling hypertension as a relevant public health problem . Although most of the predictive variables did not show a statistically significant association with the outcome, a higher prevalence of uncontrolled blood pressure was observed among men, those aged < 60 years, smokers, and alcohol users.

These findings may indicate that adherence to pharmacological and non-pharmacological treatment can influence blood pressure control, reinforcing the importance of strategies aimed at blood pressure control, considering the factors associated with uncontrolled blood pressure found in this study and in other works in the literature consulted.

These results encourage further investigation into adherence to pharmacological and non-pharmacological treatment in the study population.

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