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ORIGINAL ARTICLE

High prevalence of hypertension in the population assisted by the family health strategy

Alta prevalência de hipertensão arterial em população assistida por estratégia saúde da família

Alta prevalencia de hipertensión arterial en la población atendida por la estrategia de salud familiar

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Abstract

Objective: To identify the prevalence and factors associated with systemic arterial hypertension in adults treated at a Family Health Unit in the municipality of Cuiabá, Mato Grosso. **Method**: Cross-sectional study of a cluster sample of the population covered by the Family Health Unit. Data were collected through interviews addressing risk factors for arterial hypertension, which was measured using a digital sphygmomanometer. **Results**: A total of 147 individuals were evaluated, with a prevalence of hypertension estimated at 61.9% (95% CI: 53.5%-69.8%), predominantly among females aged 45-59 years who were overweight/obese. In the adjusted analysis, divorced/widowed marital status was the only factor independently associated with hypertension (p=0.017) in this population. Alcoholism showed only a marginally significant association with hypertension. No significant associations were identified between hypertension and anthropometric variables. **Conclusion**: high prevalence of hypertension in the study population, reinforcing the need for screening and adequate management of this condition in the local context of the family health strategy.

Descriptors: Systemic arterial hypertensin; Prevalence; Family health strategy.

Resumo

Objetivo: identificar prevalência e fatores associados à hipertensão arterial sistêmica em adultos assistidos em uma Unidade de Saúde da Família do município de Cuiabá/MT. **Método**: Estudo transversal de amostra por conglomerado da população de abrangência da USF. Dados coletados por entrevista, abordando fatores de risco para hipertensão arterial, cuja aferição foi feita com esfigmomanômetro digital. **Resultados**: Foram avaliados 147 indivíduos, cuja prevalência de hipertensão arterial foi estimada em 61,9% (IC95%: 53,5%-69,8%), com predominância no sexo feminino, idade entre 45-59 anos e com sobrepeso/obesidade. Na análise ajustada, o estado civil divorciado/viúvo foi o único fator independentemente associado à hipertensão arterial (p=0,017) nessa população. O etilismo apresentou associação apenas marginalmente significante com a hipertensão arterial. Não foram identificadas associações significativas entre hipertensão e variáveis antropométricas. **Conclusão**: alta prevalência de hipertensão arterial na população estudada, reforçando a necessidade de rastreamento e manejo adequado dessa condição no contexto local da estratégia saúde da família.

Descritores: Hipertensão arterial sistêmica; Prevalência; Estratégia Saúde da Família.

Resumen

Objetivo: identificar la prevalencia y los factores asociados a la hipertensión arterial sistémica en adultos atendidos en una Unidad de Salud Familiar del municipio de Cuiabá/MT. Método: Estudio transversal de muestra por conglomerado de la población cubierta por la USF. Datos recopilados mediante entrevista, abordando los factores de riesgo de hipertensión arterial, cuya medición se realizó con esfigmomanómetro digital. Resultados: Se evaluó a 147 individuos, cuya prevalencia de hipertensión arterial se estimó en un 61,9 % (IC95 %: 53,5 %-69,8%), con predominio en el sexo femenino, edad entre 45 y 59 años y sobrepeso/obesidad. En el análisis ajustado, el estado civil divorciado/viudo fue el único factor independientemente asociado a la hipertensión arterial (p=0,017) en esta población. El alcoholismo presentó una asociación solo marginalmente significativa con la hipertensión arterial. No se identificaron asociaciones significativas entre la hipertensión y las variables antropométricas. Conclusión: alta prevalencia de hipertensión arterial en la población estudiada, lo que refuerza la necesidad de realizar un seguimiento y un manejo adecuado de esta afección en el contexto local de la estrategia de salud familiar.

Descriptores: Hipertensión arterial sistémica; Prevalencia; Estrategia de salud familiar.

INTRODUCTION

Systemic arterial hypertension (SAH) is a chronic, multifactorial condition that is part of the noncommunicable diseases (NCDs). It is defined as systolic blood pressure (SBP) equal to or greater than 140 mmHg and/or diastolic blood pressure (DBP) equal to or greater than 90 mmHg. Globally, between 1990 and 2019, the number of people affected by SAH increased significantly, from 650 million to 1.3 billion, accounting for 10 million deaths each year, surpassing all other health risk factors.[1]

Because hypertension is asymptomatic for most of its course, its diagnosis and treatment are often overlooked. Furthermore, low patient adherence to prescribed treatment contributes to its high prevalence. In this context, lifestyle modifications are considered effective strategies for its control and are essential in both the preventive and therapeutic processes of hypertension, with the aim of reducing its incidence, prevalence, and inadequate disease control.[2]

Socioeconomic, cultural, behavioral, and genetic factors are associated with the high prevalence of hypertension. This reinforces the need to treat it as a public health priority, aiming to effectively address the problem in the population affected by the disease, thus reducing complications and the impact on the health system. This study aimed to identify the prevalence of hypertension in adults (≥45 years of age) in a population assisted by the Family Health Strategy (FHS) in Cuiabá, Mato Grosso do Sul, and to identify segments of the population most vulnerable to this condition, assisting FHS professionals in targeted and effective interventions.[1,2]

METHOD

Descriptive, cross-sectional, population-based study to determine the prevalence and factors associated with hypertension in the community covered by the Santa Laura Family Health Strategy (ESF), Cuiabá, Mato Grosso. The population survey was conducted through home visits between March and October 2023, using a Single-stage cluster random sampling. The 1,192 families registered in the ESF coverage area were considered clusters. The decision to use families as a cluster for sampling was due to the lack of a list with data on all 4,042 residents registered by the ESF team's community health agents, including adults and children of all ages.

The sample size calculation was performed as recommended by the WHO for underdeveloped and/or developing countries. The household sample size was calculated using the simple random sampling formula for infinite populations, i.e., $n = [p(1-p)Z(\alpha/2)/d2]$, where $p = 0.5$, because this proportion, when unknown for the study area, provides the largest sample size. Z is the critical value of the standardized normal distribution. In this case, $Z = 1.96$ for a 95% confidence level; d is the largest acceptable error between the population and sample proportions, which was set at 10%. Thus, the sample size was estimated at 193 households, which was multiplied by 1.5 due to the cluster sampling design effect, resulting in 290 households to be visited. Considering that each household would have at least one individual aged 45 or older, the calculated sample was increased by 29 individuals to compensate for possible losses due to the individual's absence at the time of the home visit, even after three attempts. Thus, the final expected sample was 319 individuals, residing in 290 households.

The households to be visited were identified using a map available at the health unit, showing only the blocks and lots within the ESF's coverage area. After the 319 expected households were selected at random, six teams of interviewers were assigned to conduct the home visits. In the case of an uninhabited home, no existing building, or commercial buildings, schools, or churches identified on the selected lot, the home was replaced by the first occupied home located to the right. Only individuals aged 45 or older, non-pregnant females, and without cognitive impairment were included in this study. In the case of an eligible individual who was absent at the time of the home visit, a second or third visit was conducted to avoid sample loss.

Data collection was performed through home interviews using a structured instrument available on the Google Forms application. Participants were considered hypertensive if their systolic blood pressure ≥ 140 mmHg and/or diastolic blood pressure ≥ 90 mmHg were measured in a single measurement at home. This measurement was performed using an automatic digital sphygmomanometer (EverCare, China/2022), following the manufacturer's measurement guidelines. The independent variables analyzed included sex (male/female), age (in age groups), marital status (single, married, divorced/widowed), skin color (white, black, and brown), education level (none, elementary, secondary, and higher), employment status (unemployed,

employed, homemaker, and retired), number of children (none, one, two to four, five or more children), smoking status (current smokers, past smokers, and nonsmokers), alcohol consumption (yes/no), physical activity (yes/no), and anthropometric variables: waist circumference (WC), hip circumference (HC), weight (kg), body mass index (BMI), waist-to-hip ratio (WHR), and waist-to-height ratio (WHtR).

Body height, WC, and HC were measured using an inelastic fiberglass tape measure with 10 mm accuracy. During measurement, participants were instructed to remain upright with their legs and feet parallel and their arms relaxed at their sides. The normal reference values used for WC were <90 cm for men and <80 cm for women. Body weight was measured with participants wearing light clothing and barefoot, using a portable digital scale with 100-gram accuracy. BMI was calculated by dividing weight (kg) by height (m^2), and nutritional status was classified as normal if BMI <25 kg/m^2 or overweight/obese if BMI ≥25 kg/m^2. WHtR was determined by dividing WC by height and classified as normal if <0.5 or altered if ≥0.5. The WHR was obtained by dividing the WC by the HC and the result was evaluated according to the cutoff points recommended by the World Health Organization (WHO)[11], as low, moderate and high.[4]

The study results were tabulated according to their absolute and relative frequency distributions. The prevalence of hypertension was estimated by using the number of individuals classified as hypertensive as the numerator and the sample size achieved for the study as the denominator. The measure of association adopted was the crude and adjusted prevalence ratio (PR). To analyze the factors associated with hypertension, binomial logistic regression was applied, calculating the PR and its 95% confidence interval (CI). To assess the independence of association (without confounding), multivariate logistic regression analysis was performed for variables that demonstrated $p<0.20$ in the crude bivariate analysis, with manual variable entry. For all analyses, the Stata 12.0 statistical package (StataCorp, Texas, USA) was used, and the significance level (alpha error) was set at 0.05.

The study followed the ethical guidelines of Resolution 466/12 and was registered with the Plataforma Brasil under CAAE: 66754222.6.0000.5692 and approved by the Research Ethics Committee of the UNIVAG University Center, according to Opinion No. 6.670.809. Informed consent was obtained

from each participant before the interview began. For those participants with an established diagnosis of hypertension or other morbidity at the time of the home interview, a clinical evaluation by a physician and/or nurse at the study's ESF unit was guaranteed, upon subsequent scheduling.

RESULTS

It was possible to visit 249 (85.9%) of the 290 households initially planned for the survey. In 70 of these, the first visit was not carried out due to the lack of a building or residents, and also because there was no inhabited household to the right of the lot initially selected for replacement. Therefore, a new randomization of 70 households was necessary to complete the expected sample size. In 25 (7.8%) of the households visited, the head of the household did not agree to participate in the study, resulting in sample loss. After all attempts to locate the missing individuals, it was possible to identify 315 residents in the selected households, of which 149 met the inclusion criteria for this analysis. Of these, two individuals refused to participate in the study, and 91 of the remaining 147 were identified as hypertensive, representing a prevalence (95% CI) of 61.9% (53.5%; 69.8%) of SAH in the study population.

In the group of people with SAH, the female sex predominated (61.5%), age between 45-59 years (61.5%), married marital status (50.5%), brown skin color (39.5%), basic level of education (53.8%), with some current employment (54.9%), having 2 to 4 children (71.5%), reporting current or past smoking (53.8%), declaring themselves non-alcoholics (74.7%), classified as obese or overweight (65.2%), with increased WC (84.4%), with inadequate WHtR (98.8%), with moderate or high WHR (73.1%), not practicing physical activity (74.7%) and with a family history of SAH (75.6%) (Table 1).

Table 1– Demographic and behavioral characteristics of 91 individuals with arterial hypertension in the population covered by a Family Health Strategy, in Cuiabá (MT), 2023.

Feature		**n**	**%**
Gender	*Feminine*	56	61.5
	Masculine	35	38.5
Age	*45-59*	56	61.5
	60-70	19	20.9
	70-92	16	17.6
Marital status	*Single*	24	26.4
	Married	46	50.5
	Divorced/Widowed	21	23.1

Color	*White*	20	22.0
	Black	35	38.5
	Brown	36	39.5
Education	*None*	12	13.2
	Fundamental	49	53.8
	Average	26	28.6
	Superior	4	4.4
Professional situation	*From home*	12	13.2
	Employee	50	54.9
	Unemployed	4	4.4
	Retiree	25	27.5
Children	*None*	7	7.7
	1	10	11.0
	2-4	56	61.5
	≥ 5	18	19.8
Smoking	*No*	42	46.2
	Yes, in the past	31	34.0
	Yes, currently	18	19.8
Alcohol (n=90)	*No*	47	52.2
	Yes	43	47.8
Physical Activity	*Yes*	23	25.3
	No	68	74.7
Obesity n=89	*No*	31	34.8
	Yes	58	65.2
Abdominal circumference n=90	*Normal*	14	15.6
	Increased	76	84.4
Waist-to-height ratio n=89	*Adequate*	1	1.2
	Not suitable	88	98.8
Waist to hip ratio n=89	*Low*	15	16.9
	Moderate	23	25.8
	High	51	57.3
Family history of hypertension n=86	*No*	21	24.4
	Yes	65	75.6

In the comparative analysis of the characteristics of hypertensive individuals with those of normotensive individuals in this study population, it was found that none of the characteristics evaluated showed a significant association with SAH (Table 2). However, after adjustment in the multivariate model, it was possible to identify the marital status (divorced/widowed) as the only factor independently associated with SAH (p=0.017). Alcohol consumption showed a

marginally significant association with SAH (p=0.058). The other variables studied showed no association with the event of interest (Table 3).

Table 2– Exploratory analysis of demographic and behavioral characteristics and association with the prevalence of arterial hypertension in the population covered by a Family Health Strategy in Cuiabá (MT), 2023.

Feature		High blood pressure YES (%)		High blood pressure NO (%)		Prevalence ratio (95% CI)	p*
Gender	*Feminine*	56	(63.6)	32	(36.4)	1.0	
	Masculine	35	(59.3)	24	(40.7)	0.93 (072; 1.21)	0.603
Age	*45-59*	56	(63.6)	32	(36.4)	1.0	
	60-70	19	(61.3)	12	(38.7)	0.96 (0.70; 1.33)	0.819
	70-92	16	(57.1)	12	(42.9)	0.95 (0.79; 1.13)	0.557
Marital status	*Single*	24	(57.1)	18	(42.9)	1.0	
	Married	46	(59.0)	32	(41.0)	1.03 (0.75; 1.42)	0.848
	Divorced/Widowed	21	(77.8)	6	(22.2)	1.17 (0.99; 1.38)	0.070
Color	*White*	20	(60.6)	13	(39.4)	1.0	
	Black	35	(66.0)	18	(34.0)	1.04 (0.88; 1.24)	0.619
	Brown	36	(59.0)	25	(41.0)	0.97 (0.69; 1.38)	0.881
Education	*None*	12	(52.2)	11	(47.8)	1.0	
	Fundamental	49	(63.6)	28	(36.4)	1.22 (0.79; 1.87)	0.363
	Average	26	(63.4)	15	(36.6)	1.10 (0.88; 1.39)	0.404
	Superior	04	(66.7)	2	(33.3)	1.08 (0.86; 1.37)	0.493
Professional situation	*From home*	12	(57.1)	9	(42.9)	1.0	
	Employee	50	(64.1)	28	(35.9)	1.12 (0.74; 1.69)	0.581
	Unemployed	04	(50.0)	4	(50.0)	0.97 (0.83; 1.14)	0.743
	Retiree	25	(62.5)	15	(37.5)	1.04 (0.84; 1.31)	0.693
Children	*None*	07	(77.8)	2	(22.2)	1.0	
	1	10	(58.8)	7	(41.2)	0.76 (0.44; 1.30)	0.310
	2-4	56	(61.5)	35	(38.5)	0.89 (0.73; 1.08)	0.236
	≥ 5	18	(60.0)	12	(40.0)	0.92 (0.79; 1.07)	0.270
Smoking	*No*	42	(60.0)	28	(40.0)	1.0	
	Yes, in the past	31	(63.3)	18	(36.7)	1.05 (0.79; 1.40)	0.718
	Yes, currently	18	(64.2)	10	(35.7)	1.04 (0.87; 1.22)	0.689
Alcohol (n=146)	*No*	47	(56.6)	36	(43.4)	1.0	
	Yes	43	(68.2)	20	(31.8)	1.20 (0.94; 1.55)	0.149
Physical Activity	*Yes*	23	(63.9)	13	(36.1)	1.0	
	No	68	(61.3)	43	(38.7)	0.96 (0.72; 1.28)	0.775
Obesity n=145	*No*	31	(64.6)	17	(35.4)	1.0	
	Yes	58	(59.8)	39	(40.2)	0.93 (0.71; 1.21)	0.571
Waist circumference	*Normal*	14	(66.7)	7	(33.3)	1.0	
	Increased	76	(61.3)	48	(38.7)	0.92 (0.66; 1.28)	0.622

n=145							
Waist-to-height ratio n=143	*Adequate*	1	(50.0)	1	(50.0)	1.0	
	Not suitable	88	(62.4)	53	(37.6)	1.25 (0.31; 5.0)	0.756
Waist to hip ratio	*Low*	15	(68.2)	7	(31.8)	1.0	
	Moderate	23	(60.5)	15	(39.5)	0.89 (0.60; 1.31)	0.547
	High	51	(60.7)	33	(39.3)	0.94 (0.80; 1.12)	0.497
Family history of hypertension n=139	*No*	21	(70.0)	9	(30.0)	1.0	
	Yes	65	(59.6)	44	(40.4)	0.85 (0.64; 1.13)	0.265

* Binomial logistic regression
95%CI: 95% confidence interval

Table 3– Multivariate analysis of factors associated with the high prevalence of arterial hypertension in the population covered by a Family Health Strategy in Cuiabá (MT), 2023.

Feature		**Crude prevalence ratio (95% CI)**	**p***	**Adjusted prevalence ratio (95% CI)**	**p ****
Gender	*Feminine*	1.0		1.0	
	Masculine	0.93 (072; 1.21)	0.603	0.62 (0.28; 1.40)	0.254
Age	*45-59*	1.0		1.0	
	60-70	0.96 (0.70; 1.33)	0.819	0.64 (0.24; 1.71)	0.372
	70-92	0.95 (0.79; 1.13)	0.557	0.61 (0.21; 1.77)	0.365
Marital status	*Single*	1.0		1.0	
	Married	1.03 (0.75; 1.42)	0.848	1.42 (0.59; 3.41)	0.430
	Divorced/ Widower	1.17 (0.99; 1.38)	0.070	4.74 (1.32; 17.06)	0.017
Smoking	*No*	1.0		1.0	
	Yes, in the past	1.05 (0.79; 1.40)	0.718	1.89 (0.77; 4.64)	0.163
	Yes, currently	1.04 (0.87; 1.22)	0.689	1.06 (0.37; 3.05)	0.905
Alcohol (n=146)	*No*	1.0		1.0	
	Yes	1.20 (0.94; 1.55)	0.149	2.27 (0.97; 5.28)	0.058
Body mass index n=145	*No*	1.0		1.0	
	Yes	0.93 (0.71; 1.21)	0.571	0.96 (0.90; 1.03)	0.307
Family history of hypertension n=139	*No*	1.0		1.0	
	Yes	0.85 (0.64; 1.13)	0.265	0.62 (0.24; 1.63)	0.336

* Binomial logistic regression
** Multivariate logistic regression
CI9%: 95% confidence interval

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DISCUSSION

This population-based cross-sectional study found a high prevalence of hypertension in the adult population (age ≥ 45 years) of a community covered by an ESF in the city of Cuiabá, Mato Grosso. The only factor associated with this prevalence was divorced/widowed marital status. Chronic alcohol consumption, classically demonstrated as a factor associated with hypertension in the literature[5], showed only a marginally significant association with this outcome. None of the other characteristics assessed showed any association with hypertension in the present analysis.

The hypertension stands out as one of the main public health challenges due to its high prevalence and insufficient control, contributing significantly to increased morbidity and mortality, and being one of the main cardiovascular risk factors. According to data from the World Health Organization, approximately 30% of adults aged 30 to 79 worldwide have hypertension, based on age-adjusted estimates. In Brazil, data from the National Health Survey (PNS) showed that, in 2019, 23.9% of respondents reported a medical diagnosis of hypertension. On the other hand, the Malta study demonstrated a prevalence of hypertension of 32.8%, when blood pressure was measured or self-reported by use of antihypertensive medication. In the context of primary health care, a recent study showed a prevalence of hypertension of 34.3% in the adult population of the Southern Region of Brazil.

The prevalence of hypertension found in this study was high (61.9%) for the population aged ≥45 years, when compared to the self-reported prevalence of hypertension diagnosis (23.9%) in people aged 18 years or older in Brazil in 2019. This inconsistency between the age groups analyzed certainly explains the difference in prevalence indicators found in the two studies, since it is known that hypertension is more frequent at older ages.[9] However, it is closer to that of the research also carried out in another population enrolled in the ESF in the Northeast Region (49.6%) and in a quilombola population in Mato Grosso (52.5%).10,11 High prevalence rates of hypertension, generally higher than those observed in the PNS[6] and VIGITEL[9], have already been reported for the urban area of Cuiabá and in the Central-West (28.3%) and Northeast Regions of Brazil, specifically in the states of Ceará (52.5%)[12] and Piauí (27.9%).[13]

Although several publications report a predominance of hypertension in males, its prevalence in this study was

higher among women, which coincides with the findings of previous studies conducted in quilombola populations in Mato Grosso[10] or in the general population of Minas Gerais.[14] A predominance of hypertension among women was also reported by the National Household Sampling Survey (PNAD)[13] and in other studies.[14-16] Regarding the predominant age of hypertensive individuals between 45 and 59 years, this result coincides with those of other reports of studies conducted in the urban area of Formiga (MG)[17] and São Luiz (MA)[18], with a significant increase in the prevalence of hypertension after the age of 30. With aging, there is progressive stiffening of the arterial wall and loss of its compliance, favoring the elevation of blood pressure levels.[1]

Hypertension is a chronic condition that predominantly affects Black and brown people, as demonstrated in this study. The likely factors associated with the higher prevalence of hypertension in the Black population may be genetic predisposition, reduced access to health services, and low renin production, leading to increased angiotensin II and consequent aldosterone levels.

A higher prevalence of hypertension was observed among individuals with higher levels of education, contradicting the classic descriptions that this condition is more associated with low levels of education.[11,20] The finding of this study may be related to the impact of occupational stress often present in more demanding professions, both in terms of responsibility and mental load, factors that can contribute to the development or worsening of hypertension.[20,21]

It was also observed that the frequency of hypertension in this study was higher among adults with two to four children. This observation reinforces the results that showed a higher frequency of self-reported hypertension among those who had one or more children, when compared to those without children.[20] Similarly, hypertension was more frequent among individuals who reported being sedentary. This is relevant, since the Brazilian Society of Cardiology recommends that all adults be advised to perform at least 150 minutes per week of moderate-intensity physical activity or 75 minutes per week of vigorous activity as a preventive measure for high blood pressure.[1]

The study showed that 75.6% of the individuals participating in the study had a family history of hypertension. Evidence in the literature identifies the importance of genetic factors in the development of cardiovascular disease, as primary hypertension is classified as a

multifactorial condition, but with a strong hereditary component. Most of this genetic risk is transmitted polygenicly, that is, through the contribution of hundreds of DNA variations that, together, increase the likelihood of manifesting the hypertensive phenotype, especially when interacting with environmental factors.[1,22]

As expected, a higher prevalence of hypertension was found among smokers and ex-smokers.[1,20] This can be explained by smoking-induced vasoconstriction, in addition to the fact that the presence of nicotine and carbon monoxide promotes damage to the vascular endothelium. Another aspect that cannot be ignored is the fact that abstinence from smoking can lead to increased appetite and consequently weight gain, favoring the occurrence of hypertension among ex-smokers.[23]

This study clearly demonstrated the absence of statistically significant associations between most of the characteristics studied and the prevalence of hypertension in the population evaluated. An example of this was the anthropometric measurements classically reported as risk factors for hypertension[1,4,20], such as those dependent on WC, which occurred in approximately 98% of the participants. Similarly, despite the high frequency of obesity in the study population, this characteristic was not associated with the prevalence of hypertension. This finding contradicts a study that showed an association between BMI and the prevalence of hypertension.[1,24] However, recent evidence suggests that total body fat distribution is a more accurate indicator than BMI for classifying health conditions. Thus, combining total body mass and fat distribution represents the most effective approach for clinical assessments, although no technique is completely perfect.[4]

This study also showed a higher prevalence of hypertension among widowed and divorced people, a result that corroborates findings from other studies.[20,23] Isolated life, without company, can worsen self-perceived health and result in a delay in diagnosing high blood pressure.[25] Furthermore, the association between alcohol consumption and hypertension, although marginally significant in the present study, corroborates previous observations found in other studies.[15,16] Alcohol consumption in quantities exceeding 30 grams per day is associated with a higher risk of morbidity and mortality, mainly due to cardiovascular complications. However, the safe limit of consumption has not yet been clearly defined, as factors other than the amount consumed also play a significant role in this risk.[26]

CONCLUSION

This study revealed a high prevalence of hypertension in an adult population (≥45 years of age) of a FHS in Cuiabá, Mato Grosso. Living alone, such as being widowed or divorced, was the characteristic significantly associated with hypertension in this population.

Some limitations of this study should be acknowledged. First, due to the high proportion of individuals not interviewed, the sample may not have been representative of the target population. The non-inclusion of individuals under 45 years of age may have contributed to the high prevalence of hypertension observed here. The use of a single-measurement digital sphygmomanometer at home may have overestimated hypertension due to the well-known white coat hypertension. The high number of variables with self-reported information may have compromised the accuracy of its measurements. Finally, the cross-sectional nature of the study limits the ability to establish causal relationships between the variables analyzed. Another aspect to be considered is the possibility that confounding factors were not fully controlled.

Evidence suggests that hypertension represents a critical public health challenge, with direct implications for morbidity and mortality. The high prevalence of hypertension found indicates the need for health programs focused on monitoring and controlling blood pressure, in addition to interventions for other risk factors, to improve the quality of life and well-being of the population.

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Conflict of interest
The authors have no conflict of interest to declare.

Authors' contributions
TGS, MLCR, and CJFF conceived and designed this research. ELF, GBP, GPN, IGC, JVMB, LVCTF, LBP, LGPS, LEOB, MDS, PASP, and VBSH conducted the household interviews and organized and tabulated the data. TGS and CJFF wrote the scientific article. All authors reviewed and approved the manuscript for submission for publication.

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