



DETERMINANTS OF HEALTH AND HYPERTENSION AMONG MEN FROM IN LAND SÃO PAULO – SP¹

Felipe dos Santos Costa*
Jorge Luiz Lima da Silva**
Gabriel de Moura Mello***
Giulia Lemos de Almeida****
Luiz Henrique dos Santos Ribeiro*****
Laisa Marcato Souza da Silva*****
Camille Rabello Ramos*****

ABSTRACT

Objective: to describe the blood pressure indexes, according to sociodemographic characteristics, work and life habits of men who use the Unified Health System (SUS). **Method:** this is an epidemiological survey with 370 residents in the city of Bananal – SP. A self-administered questionnaire and medical records data were used. The Social Support Scale of the Medical Outcomes Study (MOS-SSS) was used. The chi-square test was used to verify differences between the groups. **Results:** an association was found with age; eating more than three times a day; consumption of processed foods; not enough sleep; work; and absence of leisure. Hypertensive patients performed integrative practices in the UHS, and presented comorbidities such as diabetes, overweight or obesity; reported few friends; and with low perception of social support. **Conclusion:** the study shows the strength that supports the disease, association with comorbidities and low social support, which paves the way for further studies on the subject.

Keywords: Men's health. Arterial pressure. Social support.

INTRODUCTION

With accelerated globalization and urbanization processes, Brazilian people and the world population adopted a sedentary lifestyle together with the consumption of processed foods, and with excess calories, lipids, salt, sugars, and preservatives. Also, common male habits, such as frequent tobacco use and alcohol consumption, favor the onset of non-communicable chronic diseases (NCDs)⁽¹⁾.

NCDs such as cardiovascular diseases, neoplasms, chronic respiratory diseases, diabetes, and musculoskeletal diseases are multifactorial diseases, and in their predisposing factors, they have modifiable and non-modifiable risk behavioral habits. The World Health Organization (WHO) estimates

that such diseases are responsible for 58.5% of deaths worldwide, and 45.9% of the global disease burden. Such information highlights that NCDs are a serious public health problem, both in developed and emerging countries⁽²⁾.

The NCDs also generate a high level of disability and suffering in the population, in addition to economic impacts on the global economy. Evidence shows that the NCDs are long-lasting and slow to evolve, and disproportionately affect low and middle-income countries, poorer and more vulnerable populations, becoming a challenge for the Unified Health System (SUS)⁽³⁾.

The determinants of health have a strong influence on the health of males who gets more ill and tends to seek health services less. Several issues such as inequality, difficulties in

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*Nurse. Master in Public Health from Federal Fluminense University. Resende Health Department. Resende, RJ, Brazil. Email: felipedosantoscosta@gmail.com. ORCID iD: <https://orcid.org/0000-0003-4045-3816>.

**Professor. PhD in Public Health by the National School of Public Health. Fiocruz. Professor at the Department of Maternal and Child Psychiatry at the Federal Fluminense University. Niterói, RJ, Brazil. Email: jorgeluizlima@gmail.com. ORCID iD: <https://orcid.org/0000-0002-2370-6343>.

***Nursing student. Federal Fluminense University. Niterói, RJ, Brazil. Email: ORCID iD: <https://orcid.org/0000-0001-9249-2820>.

****Nursing student. Federal Fluminense University. Niterói, RJ, Brazil. Email: giulialema@id.uff.br. ORCID iD: <https://orcid.org/0000-0003-1783-3298>.

*****Nursing. Specialization in Permanent Education by the National School of Public Health. Fiocruz. Bananal, RJ, Brazil. Email: henrique.ribeiro9@hotmail.com. ORCID iD: <https://orcid.org/0000-0003-1900-5381>.

*****Nursing. Specialization in Intensive Care and Emergency - São Camilo University Center. Barra Mansa, RJ, Brazil. E-mail: laisamarcato1@outlook.com. ORCID iD: <https://orcid.org/0000-0002-5907-3816>.

*****Nursing. Graduated in nursing from Federal Fluminense University. Maricá, RJ, Brazil. Email: camillerabelloramos@hotmail.com. ORCID iD: <https://orcid.org/0000-0003-1360-3743>.

accessing goods and services, or even the cultural perspectives of gender affect the quality of life of these people. We know that men are more reluctant to seek health care⁽⁴⁾.

Currently, Brazil is undergoing epidemiological changes in the national health-disease pattern. The considerable increase in chronic diseases, including diabetes mellitus and hypertension, which are the major cause of mortality and hospital admissions, the global epidemic of overweight and obesity contribute to the incidence of non-communicable chronic diseases and increased costs health in SUS⁽⁵⁾.

Arterial hypertension (AH) is a multifactorial clinical condition characterized by elevated and sustained levels of blood pressure - BP (BP \geq 140/90mm Hg) that causes numerous losses to the health of individuals, and overload to the health systems⁽⁶⁾.

The social determinants of health, which are the conditions in which people are born, grow, and die, contribute to AH. These issues have been discussed intensively and are welcomed globally. The health-disease balance is studied in this relationship of determination, through the multiplicity of factors of social, economic, cultural, environmental, and biological-genetic origin known internationally and that reflect people's living conditions. Despite the unquestionable influence of factors external to men, they were not always considered in the formulation of health-related policies in the SUS⁽⁸⁾.

Thus, this study aims to analyze blood pressure indices, according to sociodemographic, work, and life habits of men using SUS.

METHODOLOGY

This is an epidemiological survey with patients assisted at SUS. The study population was men residing in the municipality of Bananal - SP. The municipality is located in the interior of the state of São Paulo, specifically in the historic valley/circuit of faith in the Paraíba Valley. It is estimated that 5,051 are male and from this group, 1110 live in rural areas, and 3941 in urban areas⁽⁸⁾. The city has exclusively SUS service.

For this research, we analyzed information

regarding the local male people, both from urban and rural areas. We included residents from the city of Bananal, aged between 18 and 65 years old. We excluded newly arrived residents from regions other than the municipality with less than six months ago. The sample calculation considered the estimated population of the last census (located in the 18-65 age group), 95% confidence level, 5% sampling error⁽⁹⁾. The study universe totaled 370 participants.

Trained researchers applied questionnaires in the care units and home visits. Blood pressure was confirmed by medical record data and measured according to the VII Brazilian Cardiology Guidelines for registration and confirmation on two occasions, at the health unit or home⁽¹⁰⁾. The highest pressure, whether systolic or diastolic, was decisive in the classification of the risk stratum.

The questionnaire contained variables of sociodemographic; work; health (anthropometric clinical data and access to health services); and the social support scale (MOS-SSS) that was developed for the Medical Outcomes Study (MOS-SSS)⁽¹¹⁾. In total, we investigated about 50 variables. The measurement by Cronbach's alpha was 0.982, which provides internal consistency in this study. The collection took place in the first half of 2019.

The chi-square test verifies differences between the groups analyzed, during the bivariate analysis. In the evaluation of significance, $p \leq 0.05$ was considered. The research project was approved by the Ethics and Research Committee of the Faculty of Medicine of Hospital Universitário Antônio Pedro, under number 2,617,228, and it is part of the master's dissertation of the Graduate Program in Public Health at Universidade Federal Fluminense.

RESULTS

As for the measured values, Table 1 shows the strata the blood pressure of the participants, according to parameters of the Ministry of Health (MS), and VII Brazilian Guidelines of Cardiology:

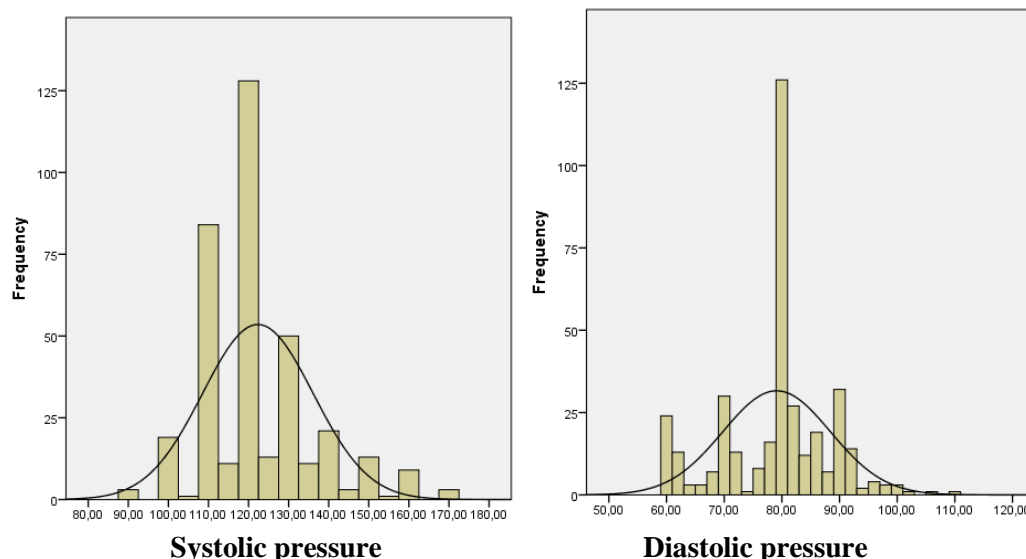
Table 1. Blood pressure of the participants, according to parameters of the Ministry of Health (MS), and VII Brazilian Guidelines of Cardiology

Blood pressure strata	N	%
Normotensive (BP <120/80 mmHg)	97	26.2
Prehypertensive (BP between 120/80 and 139/89 mmHg)	203	54.9
Grade I hypertension (BP between 140/90 and 159/99 mmHg)	60	16.2
Grade II hypertension (BP equal to or >160/100 mmHg)	10	02.7

Legend: N = simple frequency, % relative frequency.

The mean systolic pressure was 122.32 and the diastolic pressure was 79.09 mm Hg, with a standard deviation of 13.79 and 9.33, respectively. Minimum systolic pressure found

was 90 and maximum, 172 mm Hg; in the case of diastolic, 60, and 90 mm Hg, respectively (Figs. 1 and 2).



Figures 1 and 2: histograms of blood pressure distribution in SUS patients, Bananal SP, 2019.

When analyzing the studied sample and according to the pressure values, 26.2% (97) of the participants were considered normotensive, and 54.9% (203) pre-hypertensive. The variables that demonstrate statistical differences after the bivariate analysis are described below.

Regarding the sociodemographic aspects and life habits, we identified a statistical association between arterial hypertension and older men; those who consumed more than three meals a day; consumers of ultra-processed foods; those who reported sleeping less than enough; in the men who worked; and those who did not perform hobby or leisure activities.

As for health data and the use of SUS, there was an association between those who reported carrying out integrative and complementary practices or ICPs (use of teas, acupuncture, homeopathy, among others); men who were diagnosed with diabetes, those with a BMI above 25 (overweight or obesity); those who had fewer friends; and with a low perception of social support, according to the scale adopted.

Regarding the perception of social support in the participants of this study, the average found was 44.79; the median was 51.00; the fashion found was 57.00; the minimum value found was 01.00 and the maximum was 77.00, with a standard deviation of 25.00. According to the

model adopted, the general score for the perception of social support calculated using the average of the instrument's dimensions was

58.00 in which according to the scale used, is classified as moderate perception⁽¹¹⁾.

Table 2. Prevalence of arterial hypertension in men of the cities in the interior of the state of São Paulo - SP/ N=370.

SOCIODEMOGRAPHIC VARIABLES	N	n	%	p-value
Race/skin color				0.037
Black	53	23	43.39	
Brown	193	49	25.38	
White	124	35	28.22	
Age			SD ±14.53	<0.0001
Up to 30 years old	160	42	26.25	
30- 41 years old	122	23	18.85	
41- 59 years old	65	29	44.61	
More than 60 years old	23	13	56.52	
Number of meals				<0.0001
Up to 3 meals per day	174	109	10.91	
More than 3 meals a day	196	55	28.06	
Industrialized food consumption				0.033
4 to 6 times a week	225	56	24.88	
More than 6 times a week	145	51	35.17	
ICP performance				0.023
Yes	58	24	41.37	
No	312	83	26.60	
Diabetes				<0.0001
Yes	039	25	64.10	
No	331	82	24.77	
Sleep				0.006
Enough	259	64	24.71	
Less than enough	111	43	38.73	
Friends by average				0.035
Up to 3 friends	142	50	35.21	
More than 3 friends	228	57	25.00	
Perception of social support				0.007
Low	181	64	35.35	
High	189	43	22.75	
BMI				<0.0001
Up to 24	44	68	20.54	
More than 25	53	205	39.28	
Working				0.040
Yes	50	108	31.64	
No	47	165	23.58	
Hobby or leisure				0.009
Yes	42	160	29.79	
No	55	113	32.73	

Legend: N = total in the stratum. n = number of suspected men. % = prevalence. MG = minimum wages. P = Pearson's chi-square test.

DISCUSSION

According to the results found, we should highlight the number of men classified as hypertensive (18.90%). The prevalence found is lower than in known urban centers, as in the case of Rio de Janeiro (29.8%), Recife (30.3%), and Campo Grande (23.9%)⁽⁶⁾. Considering also that

the pre-hypertension condition may indicate an important risk condition for the studied group, the quantity found in this classification (54.90%) was relevant, since the MS highlights that people with borderline BP have an increased risk progression to SAH, and should be encouraged by the health team to adopt healthy lifestyle habits⁽⁶⁾.

The studied sample showed a higher prevalence of SAH in black men. The higher prevalence of the disease in this group is highlighted, a fact found in several studies^(6,12-14). We also observed the prevalence among those with more age, mainly over 60 years old. Advanced age is considered an intermediate risk factor for the development of SAH, and it is important information to be collected in the physical examination and/or clinical history of these people^(6,14).

Those who reported a greater number of meals per day, those who had a BMI above 25 (overweight or obesity) and those who consumed ultra-processed/industrialized foods showed a higher prevalence of the outcome. The excess caloric and sodium present in preservatives found in these products are also a risk factor, contributing to co-morbidities, such as obesity and diabetes^(6,15,16).

The performance of ICPs in SUS was associated with the disease studied. The search for this type of practice can be justified by the alleviation of health problems (being hypertension or co-morbidities) through alternative methods to allopathy. Diabetes is considered a high-risk factor for the development of SAH, and when associated with chronic blood pressure elevation, it worsens the prognosis/evolution for unfavorable outcomes, such as acute myocardial infarction and stroke^(6,17).

The perception of poor sleep was also associated as we know that hypertensive individuals are prone to sleep disorders, as well as apnea, and consumption of drugs to induce sleep⁽¹⁸⁾. Hypertensive individuals have worse sleep quality than normotensive individuals. Before establishing antihypertensive treatment, it is necessary to carry out investigations regarding the quality of sleep, as pharmacological therapy can influence the triggering of sleep disorders in these individuals, who are already more susceptible⁽¹⁹⁾.

We also found a higher prevalence of the surveyed disease in those who had fewer friends, who perceived less social support, and who do not frequently engage in a hobby or leisure activities. The possible association between SAH and social support in samples only of men

was not found in other studies concerning the theme.

How health services are attentive to the treatment of hypertension is not restricted only to drug treatment, but also to the observance of other crucial aspects in the follow-up of treatment, such as a structured social network and a higher level of satisfaction with the several relationships that exist in his life⁽²⁰⁾.

We identified a higher prevalence of hypertension in working men. Studies have shown the association between work and SAH, especially in stress and long working hours. It is a complex cause-and-effect relationship well investigated⁽²¹⁾. Although the stress as an isolated factor is not the origin of chronic BP changes, we can observe that several factors related to routine and work requirements impose harmful lifestyles.

The results were returned to the participants through lectures, discussion in community groups, delivery of pamphlets with alerts on prevention and healthy lifestyle measures, and awareness of employees of technical positions in the health department (through research reports), assisting in decision making.

The results obtained in this study differ from other studies, in which most of the participants are female and assiduous patients of SUS⁽²³⁾. Therefore, we need to pay attention to a portion of the population that still does not frequent health services, that is men, and who resists occasional attempts to overcome their main problems, as in the case of SAH.

We must consider some limitations. Regarding the possible measurement bias, this study used a scale validated in national and international studies with testing and retesting in the field, before each stage. Regarding blood pressure indices, guidelines were followed and were confirmed on two occasions and in medical records, and the new cases were confirmed in medical and nursing consultations. Regarding the study design, there is no way to safely establish the temporal sequence of events.

CONCLUSION

The survey shows information reported by previous studies and adds data from an exclusively male population, with emphasis on

the social support factor. The lack of bonds, represented by the smaller number of friends, low perception of social support, and the perception of unsatisfactory sleep was associated with the studied outcome, which opens space for further investigations on this topic in the area of men's health.

Other associations previously identified in the literature were corroborated in the analyzed people, naturally belonging to this method and

study design, such as black race/skin color; older age; overweight; consumption of foods rich in sodium and preservatives; diabetes, and lack of leisure activities. We perceived that the determinants of health have a great impact on the lifestyle and occurrence of SAH in the male population. Identifying, analyzing, and preventing are essential factors for maintaining health.

DETERMINANTES DE SAÚDE E HIPERTENSÃO ENTRE HOMENS DE CIDADE DO INTERIOR DE SÃO PAULO – SP

RESUMO

Objetivo: descrever os índices pressóricos, segundo características sociodemográficas, laborais e hábitos de vida de homens usuários do Sistema Único de Saúde (SUS). **Método:** trata-se de inquérito epidemiológico com 370 residentes no município de Bananal – SP. Foram utilizados questionário autoaplicado e dados de prontuários. Foi utilizada a Escala de Apoio Social do *Medical Outcomes Study* (MOS-SSS). O teste qui-quadrado foi utilizado para verificar diferenças entre os grupos. **Resultados:** encontrou-se associação com a idade; alimentar-se mais de três vezes ao dia; consumo de alimentos processados; dormir menos que o suficiente; trabalhar; e ausência de lazer. Pode-se constatar que os hipertensos realizavam práticas integrativas no SUS, e apresentavam co-morbidades como diabetes, sobrepeso ou obesidade; referiram poucos amigos; e com baixa percepção de apoio social. **Conclusão:** o estudo mostra a força que subiste a doença, associação com co-morbidades e baixo apoio social, o que abre caminho para mais estudos sobre a temática.

Palavras-chave: Saúde do homem. Pressão arterial. Apoio social.

DETERMINANTES DE LA SALUD Y LA HIPERTENSIÓN ENTRE LOS HOMBRES DEL INTERIOR DE SAO PAULO – SP

RESUMEN

Objetivo: describir los índices de presión arterial, según las características sociodemográficas, laborales y hábitos de vida de los hombres que utilizan el Sistema Unificado de Salud (SUS). **Método:** se trata de una encuesta epidemiológica con 370 residentes en la ciudad de Bananal - SP. Se utilizaron un cuestionario autoadministrado y datos de registros médicos. Se utilizó la Escala de Apoyo Social del *Medical Outcomes Study* (MOS-SSS). La prueba chi-cuadrada se utilizó para verificar las diferencias entre los grupos. **Resultados:** se encontró una asociación con la edad; alimentarse más de tres veces al día; consumo de alimentos procesados; dormir menos que suficiente; trabajo; y la ausencia de ocio. Se puede ver que los pacientes hipertensos realizaron prácticas integrativas en el SUS, y presentaron comorbilidades como la diabetes, el sobrepeso u obesidad; reportaron pocos amigos; y con baja percepción del apoyo social. **Conclusión:** el estudio muestra la fuerza que perdura la enfermedad, la asociación con las comorbilidades y el bajo apoyo social, lo que allana el camino para nuevos estudios sobre el tema.

Palabras clave: Salud del Hombre. Presión Arterial. Apoyo Social

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Corresponding author: Jorge Luiz Lima da Silva. R.Dr. Celestino, 74- sl 51-Centro. Niterói, RJ, Brasil. 21 998487314 e E-mail: jorgeluizlima@gmail.com.

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