

Prevalence of Arterial Hypertension Among Seventh-Day Adventists of the São Paulo State Capital and Inner Area

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Abstract

Background: Inadequate life habits are known to favor hypertension, and Adventists recommend healthy life habits.

Objective: To assess the prevalence of hypertension among Seventh-Day Adventists from the inner São Paulo state and São Paulo state capital.

Methods: This study assessed 264 Adventists (mean age, 41.17 ± 15.27 years; women, 59.8%) with a high religiosity level assessed by use of the Duke University Religion Index. Blood pressure was measured with a validated automatic device. The significance level adopted was $p < 0.05$.

Results: The total prevalence of hypertension was 22.7% (27.4% in the inner state and 15% in the capital). The Adventists from the capital differed from those of inner state as follows ($p < 0.05$), respectively: higher education (62% vs 36.6%); employed by a third party (44%) vs self-employed (40.9%); family income (8.39 ± 6.20 vs 4.59 ± 4.75 minimum wages); individual income (4.54 ± 5.34 vs 6.35 ± 4.8); couple responsible for family income (35% vs 39.6%); vegetarianism (11% vs 3%); blood pressure (115.38 ± 16.52/68.74 ± 8.94 vs 123.66 ± 19.62/74.88 ± 11.85 mmHg); white ethnicity (65% vs 81.1%); married (53% vs 68.9%); lower tangible support in the social aspect (15.7 ± 5.41 vs 16.9 ± 4.32); and recalling the last time one's blood pressure was measured (65% vs 48.8%). On multivariate analysis, hypertension associated with the following: 1) vegetarianism (OR 0.051; 95% CI: 0.004-0.681); 2) educational level (OR 5.317; 95% CI: 1.674-16.893); 3) recalling the last time one's blood pressure was measured (OR 2.725; 95% CI: 1.275-5.821); 4) being retired (OR 8.846; 95% CI: 1.406-55.668); and 5) being responsible for family income (OR 0.422; 95% CI: 0.189-0.942).

Conclusion: The prevalence of hypertension among Adventists was lower as compared with that reported in Brazilian studies, and it was lower in the São Paulo state capital as compared with that in the inner São Paulo state, possibly because of the better socioeconomic conditions and life habits of the former. (Arq Bras Cardiol 2012;98(4):329-337)

Keywords: Hypertension; prevalence; protestantism; food habits; life style.

Introduction

According to the World Health Organization (WHO), in the next two decades, chronic diseases, among the non-communicable ones, will take the lead among the causes of disability. Cardiovascular diseases account for 30% of the deaths worldwide¹. In such context, arterial hypertension stands out as one of the major cardiovascular risk factors. Arterial hypertension is highly prevalent in Brazil, where approximately 30% of the adults are estimated to be affected, and that number doubles in the elderly². However, the control of the disease is still very poor, despite the confirmed effectiveness of the medicamentous and non-medicamentous treatment.

The VI Brazilian Guidelines of Hypertension² have recommended the adoption of healthy life habits and styles, not only as a form of treatment, but also for disease prevention. Some

of such recommendations are as follows: body weight control; healthy eating habits; salt consumption reduction; smoking abstinence; moderate alcoholic ingestion; and physical activity.

Members of the Seventh-Day Adventist Church have already been object of several international studies^{3,4} because to their distinctive health practices. They are instructed by their religious leaders to adopt a healthy diet, mainly vegetarian (free from any animal products), and refrain from smoking and ingesting alcohol beverages, as a form of religious expression based on the Bible principle that "the human body is a temple of the Holy Spirit", according to I Corinthians 6:19. Although instructed, the number of vegetarians in that population is not greater than that of ovo-lactovegetarians (do not eat meat, but eat dairy products and eggs) and omnivores (eat animal products, including industrialized products).

Considering that the arterial hypertension prevalence might be influenced by eating habits and life style, in addition to the scarcity of Brazilian studies on the topic, this study aimed at assessing the prevalence of arterial hypertension in baptized members of the Seventh-Day Adventist Church in the city of São Paulo and inner São Paulo state. In addition, associated variables were identified.

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Manuscript received May 06, 2011; revised manuscript received October 13, 2011; accepted November 09, 2011.

Methods

This is a descriptive, comparative, cross-sectional field study with a quantitative approach of 264 members of the Seventh-Day Adventist Church (100 members from the São Paulo state capital and 164 members from inner São Paulo state). The following was used for calculating the sample size: estimation of hypertension prevalence of 25%; variation of 8%; type I error of 5%; and power of 80%. With such parameters, the size of the sample was established as 242 participants.

The inclusion criteria were as follows: minimum age of 18 years; to be a baptized member who regularly attends the religious activities; to be able to read and write; and to sign the written informed consent (WIC). In the São Paulo state capital, the churches randomly selected belonged to the Southern region of the city, which is the urban area with the greatest concentration of Adventists per inhabitant, according to data provided by the Southern Paulista Association of the Adventist Church, and were as follows: Santo Amaro and Campo Limpo. In the inner São Paulo state, the churches randomly selected belonged to the Southwestern Paulista Association (with headquarters in the city of Sorocaba), and were in the cities of Itapeva and Itararé. The socioeconomic characteristics of the inner state cities and of their churches were very similar, allowing for the leveling of the subjects of study. All churches in the two municipalities were included. The selection of participants was also randomly performed with a computer, using the list of members baptized provided by each church's office. After the selection, the individuals were personally invited to participate in the study and provided WIC. The project was approved by the Ethics Committee (# 803/2009).

The following biosocioeconomic variables were assessed: age; sex; marital status; self-reported ethnicity; occupation; housing; time since church baptism; personal and family income. The following aspects regarding life style were assessed: eating habit (vegetarian or not); smoking habit; alcoholic beverage ingestion; and physical activity. The social aspect was assessed by use of the Social Support Scale⁵ comprising 19 questions in the following five domains: tangible support; affective support; emotional support; informational support; and positive social interaction. Each response was attributed a score, ranging from 1 (never) to 5 (always), and then all the points obtained were added. The total support index ranged from 19 points (minimum) to 95 points (maximum). After calculating the median, the mean of the points was established as 38, and the participants obtaining from 19 to 38 points were considered to receive low social support, while those with indices ranging from 39 to 95 were considered to receive high social support.

The weight (in kilograms) was measured by use of a digital scale (Tanita Solar Scale HS 301), and height (in centimeters) was measured by use of a non-distensible measuring tape, positioned at a 90° angle with the floor, and one meter above it. Participants were asked to take off their shoes, keep their feet united and against the wall so as to have their heels, calves, buttocks, scapulae, and head supported, and to maintain their body straight looking towards the horizon. A 30-cm rule positioned on the top of the head was used

for the reading of height measurement. Such measurements enabled the calculation of the body mass index (BMI) (weight/height²), which was classified according to the WHO as follows: normal (< 25 kg/m²); overweight (25 to 29.9 kg/m²); and obese (≥ 30 kg/m²)⁶. Because abdominal circumference is a strong predictor of cardiovascular events, it was measured and classified according to the Brazilian Association for the Study of Obesity and Metabolic Syndrome⁷, and the limit considered normal for men was < 95 cm, and for women, < 80 cm.

Blood pressure measurement was performed at the meeting room of the churches, by using a validated automatic device (OMROM HEM 705CP), according to the recommendations of the VI Brazilian Guidelines of Hypertension², and was as follows: three consecutive measures at 1-minute intervals; previous rest for at least five minutes; sitting position; back supported and uncrossed legs; cuff adequate to arm size; empty urinary bladder; abstinence from smoking and/or alcoholic beverages, coffee, and food for at least 30 minutes. The mean of the last two measures was used for the analysis, and the individuals were classified as hypertensive when their blood pressure values were ≥ 140 and/or ≥ 90 mmHg. The prevalence of self-reported hypertension was identified by the affirmative answer to the question "has any health professional ever said that you have high blood pressure?"

Religiosity was assessed by use of the Duke University Religion Index (DUREL)⁸, composed of five questions that assess intrinsic religiosity and the organizational and non-organizational dimensions of religiosity that most relate to health outcome. The DUREL measures each of these dimensions by a separate subscale, and their scores were not summed in a total score, according to recommendations of the authors who validated the instrument in Brazil. The statistical analysis used the Statistical Package for Social Sciences (SPSS) software, version 18, with the help of a statistical assistant. The classifying descriptive variables are shown as absolute (n) and relative (%) frequencies, and the continuous data as mean and standard deviation. The chi-square and Fisher exact tests were used when necessary. A p value < 0.05 was considered statistically significant. The variables that showed significance in univariate analysis underwent logistic regression.

Results

The characterization of the 264 participants showed that their mean time since baptism at the Seventh-Day Adventist Church was 19.53 ± 14.97 years, their mean age was 41.17 ± 15.27 years, the female sex predominated, as did those who had their own house. Participants from the capital significantly differed (p < 0.05) from those from the inner state in the following characteristics, respectively: white ethnicity (65% vs 81.1%); married (53% vs 68.9%); higher education (62% vs 36.6%); employed by a third party (44%) vs self-employed (40.9%); couple responsible for family income (35% vs 39.6%); individual income (4.54 minimum wages vs 6.35 minimum wages); family income (8.39 minimum wages vs 4.59 minimum wages) (tab. 1).

Table 1 - Biosocioeconomic characteristics of the Adventist participants from the São Paulo state capital and inner area – 2011

Variables	Capital (n = 100)		Inner area (n = 164)		Total (n = 264)		p value
	n	%	n	%	n	%	
Ethnicity (self-reported)							0.01
White	7	7	11	6.7	18	6.8	
Black	10	10	6	3.7	16	6.1	
Mulatto	11	11	11	6.7	22	8.3	
Mixed heritage	7	7	3	1.8	10	3.8	
Asian	65	65	133	81.1	198	75	
Marital status							0.02
Single	35	35	32	19.5	67	25.4	
Married	53	53	113	68.9	166	62.9	
Separated	6	6	13	7.9	19	7.2	
Widowed	6	6	6	3.7	12	4.5	
Educational level							
Able to read and write	14	14	15	9.1	29	11	
Elementary education (complete/incomplete)	5	5	26	15.9	31	11.7	
Secondary education (complete/incomplete)	19	19	63	38.4	82	31.1	
Higher education	62	62	60	36.6	122	46.2	
Occupation							0.00
Self-employed	31	31	67	40.9	98	37.1	
Homemaker	5	5	27	16.5	32	12.1	
Retired	5	5	6	3.7	11	4.2	
Employed by a third party	44	44	60	36.6	104	39.4	
Unemployed	15	15	4	2.4	19	7.2	
Type of household							0.23
Own	56	56	109	66.5	165	62.5	
Rented	38	38	46	28.0	84	31.8	
Borrowed	3	3	7	4.3	10	3.8	
Other	3	3	2	1.2	5	1.9	
Responsible for the family income							0.00
Participant	31	31	54	32.9	85	32.2	
Spouse	7	7	27	16.5	34	12.9	
Couple	35	35	65	39.6	100	37.9	
Son/daughter	2	2	1	0.6	3	1.1	
Not informed	-	-	1	0.6	1	0.4	
Other	25	25	16	9.7	41	15.5	

Continuation				
Age (years)				
Mean ± SD				0.07
	39.17 ± 15.27	42.39 ± 15.19	41.17 ± 15.27	
Individual income (minimum wages, mean ± SD)				
	4.54 ± 5.34	6.35 ± 48	5.67 ± 37.94	0.00
Family income (minimum wages)				
	8.39 ± 6.20	4.59 ± 4.75	6.03 ± 5.64	0.00
Time since baptism (years, mean ± SD)				
	19.70 ± 12.79	19.42 ± 16.20	19.53 ± 14.97	0.17

p value = capital vs inner area.

In addition, lower blood pressure levels were observed among individuals from the capital as compared with those from the inner state, and greater body mass index and abdominal circumference among participants from inner state, for both women and men (tab. 2).

Regarding life habits and styles, the behavior of the participants from the capital differed from that of those from the inner state ($p < 0.05$) in terms of a greater proportion of vegetarians (11% vs 3%, respectively) and a lower proportion of ovo-lactovegetarians (9% vs 15.9%, respectively). It is worth noting that most participants reported never smoking and regularly practicing physical activities (tab. 3).

The prevalence of arterial hypertension was identified as 22.7%, being statistically lower ($p < 0.05$) in the capital as compared with that in the inner state (15% vs 27.4%), the same occurring with the self-reported prevalence (13% vs 20.1%). Most participants (60.6%) reported not having the habit of measuring blood pressure. However, among those who measured their blood pressure, a significant difference ($p < 0.05$) was observed regarding the site of measurement.

Most participants from the inner state measured it at a basic health care unit (45.9% vs 20.9%), while those from the capital measured it at home (39.5% vs 21.3%). In terms of recalling the last blood pressure measurement, participants from the capital had a better recollection, differing significantly from the inner state participants (65% vs 48.8%, respectively; $p < 0.05$) (tab. 3).

On the social support assessment, the inner state participants had a significantly greater tangible support as compared with those from the capital (16.9 ± 4.32 vs 15.7 ± 5.41) (fig. 1).

Regarding religiosity, the behavior of the participants from the capital did not differ from that of the inner state participants. In terms of the organizational and non-organizational dimensions of religiosity, respectively, most participants reported attending church or religious meetings more than once a week (68.2%), and, attending private religious activities once a week (47.3%). In terms of intrinsic religiosity, most participants reported being definitely true the following statements: "in my life, I experience the presence of God (or of the Holy Spirit)"

Table 2 – Blood pressure (mean ± SD, mmHg), body mass index (mean ± SD) and abdominal circumference (mean ± SD) of Adventist participants from the São Paulo state capital and inner area – 2011

Variables	Capital (n = 100)		Inner area (n =164)		Total (n = 264)		p value
Systolic blood pressure	115.38 ± 16.52		123.66 ± 19.62		120.53 ± 18.91		0.00
Diastolic blood pressure	68.74 ± 8.94		74.88 ± 11.85		72.55 ± 11.23		0.00
Body mass index (kg/m ²)	25.08 ± 4.76		26.21 ± 4.70		25.78 ± 4.75		0.06
Abdominal circumference (cm)	Men	Women	Men	Women	Men	Women	
	91.40 ± 9.66	90.83 ± 12.78	91.78 ± 11.08	94.15 ± 11.20	91.63 ± 10.52	92.89 ± 11.89	
p value	0.81		0.18		0.38		
Total	91.06 ± 11.59		93.20 ± 11.18		92.39 ± 11.36		

p value = capital vs inner area.

Table 3 - Characterization of Adventist participants from the São Paulo state capital and inner area regarding arterial hypertension (reported and measured), life habits, and blood pressure control - 2011

Variables	Capital (n = 100)		Inner area (n = 164)		Total (n = 24)		p value
	n	%	n	%	n	%	
Hypertension informed by a health professional							0.30
Yes	13	13	33	20.1	46	17.4	
No	87	87	131	79.9	218	81.9	
Habit of measuring blood pressure							0.34
Yes	43	43	61	37.2	104	39.4	
No	57	57	103	62.8	160	60.6	
Place where blood pressure is measured							0.01
Drugstore	1	2.3	5	8.2	6	5.8	
Home	17	39.5	13	21.3	30	28.8	
Basic health care unit	9	20.9	28	45.9	37	35.6	
Other	16	37.2	15	24.6	31	29.8	
Recollection of the last time blood pressure was measured							0.01
Yes	65	65	80	48.8	145	54.9	
No	35	35	84	51.2	119	45.1	
Arterial hypertension							0.01
Yes	15	15	45	27.4	60	22.7	
No	85	85	119	72.6	204	77.3	
Vegetarian							0.01
Yes	11	11	5	3	16	6.1	
No	80	80	133	88.1	213	80.7	
Ovo-lactovegetarian	9	9	26	15.9	35	13.3	
Smoking							0.44
No, never	87	87	137	83.5	224	84.8	
No, quitted	13	13	27	16.5	40	15.2	
Physical activity							0.10
Yes	50	50	76	46.3	126	47.7	
No, never	16	16	44	26.8	60	22.7	
No, quitted	34	34	44	26.8	78	29.5	

p value = capital vs inner area.

(90.5%); “my religious beliefs are what really lie behind my whole approach to life” (77.3%); and “I try hard to carry my religion over into all other dealings in life” (80.6%) (tab. 4).

On the logistic regression analysis, the variables that remained in the arterial hypertension association model were: being vegetarian as opposed to not being vegetarian (OR 0.051; 95% CI: 0.004-0.681); and the couple being responsible for family income as opposed to the participant being the only responsible (OR 0.422; 95% CI: 0.189-0.942). Such variables had a protective effect against hypertension. On the other hand, the following variables increased the chance of having hypertension by 5.3 times, 8.8 times, and 2.75 times, respectively: low educational level as compared with higher

education; being retired as opposed to being employed by a third party; and not recalling when blood pressure was last measured (tab. 5).

Discussion

Brazilian population surveys carried out in the past two decades have indicated that the prevalence of arterial hypertension has increased, with indices over 30%². The major finding of the present study identified a slightly lower total prevalence (22.7%). Comparing the prevalences obtained in the cities of inner São Paulo state studied (Itapeva and Itararé) with that of the capital, the former were greater (27.4%) and

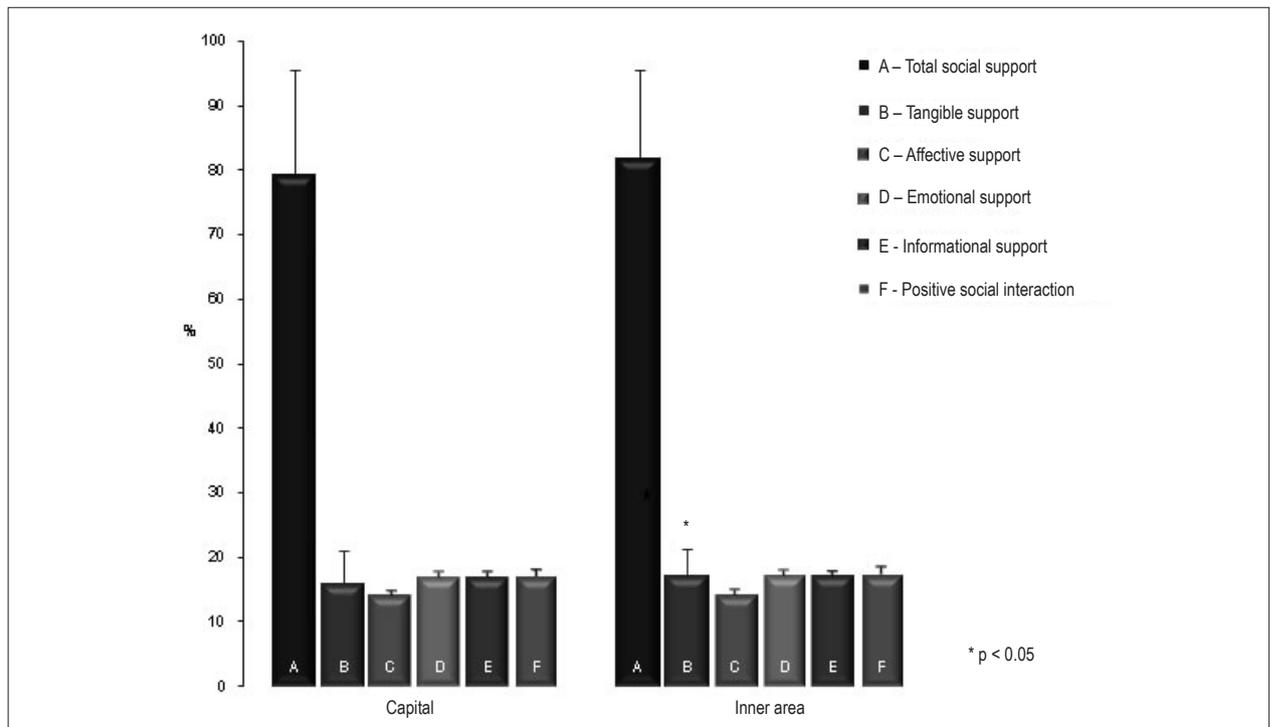


Figure 1 - Distribution of the Adventist participants from the São Paulo state capital and inner area according to the domains of the Social Support Scale - 2011.

closer to that estimated for the whole country; the prevalence in the capital (15%), however, was much lower than the national findings. It is worth noting the lower prevalence in the São Paulo state capital, because it was believed that the high exposure to stressors and the greater possibility of inadequate life styles and habits, characteristic of large cities, could contribute to a higher prevalence of hypertension. Brazilian studies have reported a higher prevalence of hypertension in large cities, such as the capitals of the states of Goiás (36.4%)⁹ and Mato Grosso do Sul (41.4%)¹⁰ and Brasília (37.9%)¹¹, as compared with that of smaller cities, such as Sinop in the inner Mato Grosso state (23.2%)¹², São José do Rio Preto in the inner São Paulo state (25.2%)¹³, and Luzerna in the inner Santa Catarina state (14.7%)¹⁴.

The higher prevalence of hypertension in the inner São Paulo state might be associated with the presence of unfavorable socioeconomic factors, distinct from those of the capital, such as low educational level, lower family income, and non-qualified occupation. Some studies have evidenced the relationship of low income and educational level with hypertension^{15,16}, in addition to their influence on adherence to treatment^{9,17}. The educational level was such an important variable that it was maintained in the final logistic regression model for arterial hypertension, because those who were able only to read/write or had only elementary education had greater chances to develop the condition as compared with those with higher education. The lower purchasing power and educational level of inner state participants could act as obstacles to the adoption of healthy life habits and styles, early detection of disease, and, thus, antihypertensive treatment. By having higher educational level and being more often employed by a third party, the Adventists from the capital most likely guaranteed a higher monthly family income. Among

the Adventists studied, the condition of being retired increased by almost nine times the likelihood of having arterial hypertension as compared with being employed by a third party.

In addition to unfavorable socioeconomic factors that contributed to the presence of hypertension, the influence of the eating habit is worthy of note, because, on logistic regression analysis, the vegetarian diet had a protective effect against hypertension. The eating pattern of Adventists is considered a differential regarding other religious groups because of their abstinence from food of animal origin and/or its reduced use, in addition to refraining from smoking and alcohol drinking. The significant majority of international studies involving Adventists have emphasized eating issues, because they are related to the instructions provided by the Adventist Church to its members. Such eating recommendations are believed to interfere with the results found in the studies. A study¹⁸ with Afro-American Adventists has shown that blood pressure was significantly greater in non-vegetarians. Likewise, other studies^{19,20} have shown that both men and women who eat meat have higher blood pressure, cholesterol and triglyceride levels, and body mass index as compared with vegetarians.

Recalling the last time when blood pressure was measured is a strong indicator that hypertensives are concerned and possibly more involved with the treatment, since that variable remained in the logistic regression model. One of the major challenges related to hypertension is the lack of blood pressure control in hypertensives. Approximately only 30%^{21,22} of the hypertensives are considered to have their blood pressure controlled ($\leq 140/90$ mm Hg), a large part of the problem being related to lack of adherence to treatment. Attending a health care center to receive

Table 4 – Characterization of the Adventist participants from the São Paulo state capital and inner area according to the Duke University Religion Index (DUREL) – 2011

Variables	Capital (n = 100)		Inner area (n = 164)		Total (n = 264)		p value
	n	%	n	%	n	%	
HOW OFTEN							
1- do you attend church or other religious meeting?							0.11
More than once a week	60	60	120	73.2	180	68.2	
Once a week	29	29	28	17.1	57	21.6	
Twice or three times a month	10	10	15	9.1	25	9.5	
A few times a year	1	1	1	0.6	2	0.8	
Once a year or less	-	-	-	-	-	-	
Never	-	-	-	-	-	-	
2- do you spend time in private religious activities, such as prayer, meditation, or Bible or other religious text study?							0.34
More than once a week	42	42	67	40.9	109	41.3	
Once a week	47	47	78	47.6	125	47.3	
Twice or three times a month	10	10	13	7.9	23	8.7	
A few times a year	-	-	2	1.2	2	0.8	
Once a year or less	-	-	4	2.4	4	1.5	
Never	1	1	-	-	1	0.4	
PLEASE MARK THE EXTENT TO WHICH EACH STATEMENT IS TRUE OR NOT TRUE FOR YOU							
3-"In my life, I experience the presence of God (or of the Holy Spirit)"							0.83
Definitely true	91	91	141	90.2	239	90.5	
Tends to be true	9	9	16	9.8	25	9.5	
Unsure	-	-	-	-	-	-	
Tends not to be true	-	-	-	-	-	-	
Definitely not true	-	-	-	-	-	-	
4-"My religious beliefs are what really lie behind my whole approach to life"							0.80
Definitely true	76	76	128	78	204	77.3	
Tends to be true	21	21	33	20.1	54	20.5	
Unsure	3	3	3	1.8	6	2.3	
Tends not to be true	-	-	-	-	-	-	
Definitely not true	-	-	-	-	-	-	
5-"I try hard to carry my religion over into all other dealings in life"							0.66
Definitely true	77	77	135	82.2	212	80.6	
Tends to be true	19	19	22	13.5	41	15.6	
Unsure	3	3	4	2.5	7	2.7	
Tends not to be true	1	1	2	1.2	3	1.1	
Definitely not true	-	-	-	-	-	-	

p value = capital vs inner area.

medication or even only to have their blood pressure measured would denote a greater concern with their health, and, thus, adhesion to treatment.

The prevalence of hypertension can also be influenced by ethnicity, although the present study showed that the white

color predominated in the inner São Paulo state. Studies carried out in Brazil^{23,24} have shown that, usually, non-white are more commonly hypertensive than white individuals. A study with North-American Adventists²⁵ has found that 33.6% of black individuals are hypertensive, while the prevalence of

Table 5 – Result of the logistic regression model regarding arterial hypertension among Adventists in the São Paulo state – 2011

Variables	p value	Odds ratio	95% CI	
Vegetarian	0.02	0.051	0.004	0.681
Educational level (≤ elementary education)	0.00	5.317	1.674	16.893
Occupation (retired)	0.02	8.846	1.406	55.668
Recollection of the last time blood pressure was measured	0.01	2.725	1.275	5.821
Responsible for family income (couple)	0.03	0.422	0.189	0.942

hypertension in white individuals was 25.4% ($p < 0.05$). In addition to the higher blood pressure levels observed among black individuals, those of mixed heritage and mulattos, they also have lower indices of blood pressure control and adhesion to treatment. Such situation could be explained by their less favorable life conditions. Another variable that differed between the inner São Paulo state and capital groups relates to marital status. In both groups, the married status and the couple being responsible for the family income predominated, the latter having a protective effect against hypertension. In addition, not only the spouse, but also the other family members provided support to the hypertensive, motivating him/her to be treated and to understand his/her disease.

Regarding social support, the participants from inner São Paulo state reported receiving more tangible support. Although that variable did not remain in the logistic regression model, that fact is relevant. The high involvement of the members of that religious community with church activities, and, thus, the maintenance of close social ties might help to maintain health. It is worth noting that the capital did not differ from the inner state in terms of religiosity, which proved to be high in all questions of the instrument used. A meta-analysis²⁶ has shown that religious involvement and spirituality are associated with better health indices, such as longevity, management skills, and quality of life, and fewer cases of anxiety, depression, and suicide.

Conclusion

Cross-sectional studies cannot attribute causality to associations found, because they assess outcome and

exposure simultaneously, and that might be one limitation of the present study. However, to our knowledge, this is the first Brazilian study showing the influence of the vegetarian diet on arterial hypertension, in addition to stressing once more that unfavorable socioeconomic conditions might contribute to the development of the disease. Life habits and styles have also been shown to influence blood pressure levels, indicating that the adoption of a healthy life style is extremely important to prevent and control hypertension. The health professionals should direct actions to all stages of the health-disease continuum, with strategies aimed at disease prevention, early identification of blood pressure elevation, pharmacological and non-pharmacological treatment propositions, and control of hypertensives. However, the socioeconomic context of the population should always be considered, because it is an extremely important factor in the genesis of the disease and its treatment.

Potential Conflict of Interest

No potential conflict of interest relevant to this article was reported.

Sources of Funding

There were no external funding sources for this study.

Study Association

This article is part of the thesis of master submitted by Leilane Bagno Eleutério da Silva, from Escola de Enfermagem da Universidade de São Paulo.

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