The care of women in the control and prevention of arterial hypertension in the family environment

Cuidados de mulheres para o controle e a prevenção da hipertensão arterial no ambiente familiar

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RESUMO

Objetivo: Identificar os cuidados realizados por mulheres hipertensas para o controle deste agravo e sua prevenção no ambiente familiar. **Método**: Estudo descritivo, sendo entrevistadas 126 mulheres em unidade ambulatorial, em Salvador-BA. **Resultados:** Constatou-se elevada frequência de ingestão de alimentos ricos em sódio (66,6%), hábito de preparar o feijão com carnes salgadas (63,5%), sedentarismo (72,2%), não fracionamento das refeições (73,8%) e baixo consumo de alimentos integrais (74,6%). Apesar de 34,1% residirem com algum familiar hipertenso, 64,1% não conversavam com familiares sobre a prevenção e controle da doença, 73,0% não os orientavam para a aferição da pressão arterial e 50% não reduziam o sal para toda a família. **Conclusão:** A maioria não realizava o autocuidado necessário ao controle da doença e não estendia à família os cuidados referentes à prevenção. É preciso conhecer crenças e barreiras para adesão à terapêutica e compartilhar com as mulheres uma proposta de cuidado que possa ser estendida à família.
Descritores: Hipertensão; Cuidado; Prevenção; Enfermagem**.**

ABSTRACT

Objective: To identify the care performed by hypertensive women for the control of this grievance and its prevention in the family environment. **Method:** Descriptive study with the interview of 126 women in an outpatient clinic, in Salvador-BA. **Results:** The following was verified: a high frequency of ingestion of food with elevated levels of sodium (66.6%), the habit of preparing bens with salted meat (63.5%), sedentary lifestyles (72.2%), not fractioning meals (73.8%) low consumption of whole foods (74.6%). Despite 34.1% living with some hypertensive family member, 64.1% did not talk with the family about prevention and control of the disease, 73.0% did not guide them to check their blood pressure and 50% did not reduce the content of salt for the whole family. **Conclusion:** Most did not perceive the self-care necessary for the control of the disease and did not extend to the family the cares related to prevention. It is necessary to understand the beliefs and barriers for adhesion to the therapeutics and share with the women a proposal for the care that can be extended to the family.
Descriptors: Hypertension; Care; Prevention; Nursing.

ORIGINAL

Introduction

Systemic arterial hypertension (SAH) is a multifactorial chronic disease, often detected late due to its slow and silent evolution. This is one of the most important risk factors for cardiovascular disease, occupying a prominent place in the context of morbidity and mortality rates in adult population worldwide.[1] We have seen an increased prevalence of SAH over the years, affecting between 21.5% and 24.4% of Brazilians[2], being responsible for decreases life expectancy, the high frequency of hospitalizations and the high medical and social costs.[3]

Among the several factors that contribute to the SAH emergence, both genetic and environmental factors play an important role, especially age, gender, race/color, heredity, obesity, psychosocial stress, sedentary life, excessive alcohol consumption, high sodium intake and inadequate dietary pattern.[3] The contribution of genetic burden to blood pressure variation is estimated to be between 30% and 60%.[4] Despite the association of hypertension with constitutional factors, the disease prevention and control or its onset postponement can be achieved by adopting a healthy lifestyle that must be preserved from childhood.[6]

Primary prevention, defined as the implementation of actions and strategies before the onset of a disease should be addressed to the factors involved in its genesis in order to prevent or delay its development.[7] In the case of primary prevention of hypertension, these actions can be developed on a large scale (population strategies) and with the population under higher risk for the disease (strategies for selected individuals). In the latter, actions should target individuals in more specific environments, such as home and workplace, and should include the healthcare focused on the prevention and control of modifiable risk factors.[6]

Health professionals through educational actions can help people with hypertension to adopt life habits necessary to disease control and to develop self-care skills[8], as well as becoming knowledge multipliers. Consequently, these people will be able to share this care and knowledge with other family members contributing to the illness prevention and family complications. Usually the construction and negotiation of meanings for care provision takes place in families and among the people with whom they relate with.[9]

The family is considered the most important microstructure for understanding the disease process and for conducting health care practices directed at its members and cultural standards have defined women as the figure that has incorporated the functions of guiding or performing the majority of household chores related to food and the care of its members.[10]

Given its importance, health professionals should consider the family as a partner in disease healthcare of the family context, providing educational support so that it can innovate and stimulate prevention and control practices. For this purpose, they need to know how health promotion and disease prevention care is provided in this context by both hypertensive relatives and those who have not developed the disease.

Despite the large number of studies on care related to the control of hypertension, research regarding the sharing of hypertensive people about care with their families aiming at the primary prevention of the disease in the family environment is still incipient. The self-care of one member of the hypertensive

family may or may not express to other members the adherence to care for the prevention and control of the disease.

Based on the foregoing, we aimed to identify the care performed by hypertensive women for the control of this grievance and its prevention in the family environment.

Method

This is a descriptive quantitative study conducted in an outpatient clinic of a private higher education institution in the city of Salvador, Bahia.

The convenience sample consisted of 126 women attended at the outpatient clinic from February to April 2015, who met the following inclusion criteria: medical diagnosis of hypertension, knowledge about its diagnosis and age over 18 years.

Women were interviewed using an instrument with closed questions containing: sociodemographic data (age, self-reported color/race, marital status, education, monthly family income, employment status, number of children, with whom they live); data on hypertension (family history of hypertension; knowledge of genetic inheritance as a risk factor for hypertension, residence with hypertensive family member); and care regarding the control of their hypertension and the prevention and control of the disease in family members.

Data were recorded and processed in the Statistical Package of Social Sciences program (SPSS 14.0) and analyzed in absolute numbers and percentages, mean and standard deviation.

The study was approved by the Research Ethics Committee of the Baiana School of Medicine and Public Health, Opinion 524.549 and complied with the ethical principles of Resolution 466/12 of the National Health Council. All women signed the Informed Consent Form (ICF) after reading and clarifying the research objectives and procedures.

Results

The average age of women was 57.2 years (SD = 10.6), minimum age of 29 and maximum of 88 years and the average time of diagnosis of hypertension of 11.6 years (SD = 10.4). Self-declared women of brown and black color (55.6%), with incomplete primary education (39.7%), with monthly family income of 1 to 3 minimum wages (55.6%), who lived without a partner (61,9%). Regarding work activity, 27.8% were active, with 11.9% formal employment and 15.9% self-employed. The highest percentage had children (89.7%) and lived in the same household with children and grandchildren (76.2%). More than half of respondents (50.8%) did not consider genetic inheritance as a risk factor for hypertension (Table 1).

Most women had family history of hypertension (83.3%). 34.1% lived with a family member diagnosed with hypertension, of which 34.9% were children and grandchildren, 39.5% partners and 25.6% mother and siblings. The average number of residents in the same household as those interviewed was 2.4 people (SD = 1.5), ranging from 1 to 8 people.

Table 1. Distribution of women according sociodemographic characteristics. Salvador, BA, Brazil, 2015**.**

Sociodemographic Characteristics	n (%)
Self-declared race / skin color	
White	11 (8,7)
Brown	70 (55,6)
Black	45 (35,7)
Education	
Illiterate / Can read and write	16 (12,7)
Elementary school incomplete	50 (39,7)
Elementary school complete	16 (12,7)
High School complete	8 (6,3)
High School imcomplete	34 (27,0)
College	2 (1,6)
Monthly Family Income	
< 1 minimum wage	54 (42,9)
1-3 minimum wages	70 (55,6)
4-5 minimum wages	2 (1,6)
Marital Status	
Single/ Separate/ Widow	78 (61,9)
Married/ Stable Union	48 (38,1)
Labor Status	
Retired (no activity)	40 (31,7)
Working with employment bond	15 (11,9)
Autonomous	20 (15,9)
Unemployed	33 (26,2)
Domestic	18 (14,3)
You live with descendants (children and grandchildren)	
Yes	96 (72,2)
No	30 (23,8)
You live with a hypertensive family member	
Yes	43 (34,1)
No	83 (65,9)
You consider heredity as a risk factor for hypertension	
Yes	62 (49,2)
No	64 50,8)

Regarding the care adopted to control their hypertension (Table 2), it was observed that 13.5% of women did not have regular medical follow-up. Regarding eating habits, the consumption of foods rich in sodium was frequent, as only 33.3% did less than twice a week. In addition, more than half of women (63.5%) usually consumed beans prepared with salted meat. Most women did not eat foods high in saturated fat (60.3%), but more than a third still

maintained this behavior two or more times a week. Frying was not mentioned as a frequent form of food preparation (57.1%).

Low consumption of whole foods was observed, as 42.9% consumed less than twice a week and only 17.5% daily. The habit of eating fruits and vegetables daily was found to 57.9% and from 4 to 6 times a week to 19.0%. Regarding the fractionation of meals most (73.8%) did not eat every 3 hours (Table 2).

Of the 27.8% women who practiced physical activity regularly (three or more times a week), 82.9% performed walking, 5.7% did aqua aerobics and 11.4% practiced aerobic activity and weight training. Among the 91 (72.2%) women who did not perform regular physical activity, the mentioned reasons were related to physical complaints such as musculoskeletal pain, tiredness and visual problems (18.3%), medical contraindication (8.7%); emotional problems including demotivation, laziness and discouragement (16.7%), lack of time (23.8%) and lack of infrastructure in the neighborhood of residence (4.0%).

Table 2 - Distribution of women according to care adopted to control their hypertension. Salvador, BA, Brazil, 2015.

Variables	n (%)
Medical follow-up	
Yes	109 (86.5)
No	17 (13.5)
Consumption of high sodium foods	
Daily	17 (13.5)
4 to 6 times a week	24 (19.0)
2 to 3 times a week	43 (34.1)
Less than twice a week	42 (33.3)
Preparation of beans with salted meat	
Usually	80 (63.5)
Sometimes	18 (14.3)
No	28 (22.2)
Consumption of foods high in saturated fat	
Daily	3 (2.4)
4-6 times a week	13 (10.3)
2-3 times a week	34 (27.0)
Less than twice a week	76 (60.3)
Preparation of fried foods	
Daily	2 (1.6)
4-6 times a week	11 (8.7)
2-3 times a week	41 (32.5)
Less than twice a week	72 (57.1)
Whole Food Consumption	
Daily	22 (17.5)
4-6 times a week	10 (7.9)
2-3 times a week	40 (31.7)
Less than twice a week	54 (42.9)
Fruit and Vegetable Intake	
Daily	73 (57.9)
4-6 times a week	24 (19.0)
2-3 times a week	26 (20.6)
Less than twice a week	3 (2.4)

Breakdown of meals every 3 hours	
Yes	33 (26.2)
No	93 (73.8)
Practice of phisycal activity*	
Yes	35 (27.8)
No	91 (72.2)

*(≥ 3 times a week at least for 30 minutes)

Regarding the care that these women developed with their relatives at home, 64.1% did not talk to them about the prevention and control of arterial hypertension and 73.0% did not guide them to check their blood pressure periodically (Table 3).

In relation with food preparation, 47.6% of women prepared their food separately from the family and 50% did not reduce salt use for the whole family.

The sixty-three women who reduced salt in the preparation of food for the whole family observed that 33.3% of their members added this spice after the ready meal (Table 3).

Table 3 - Distribution of women according to care with family members related with the hypertension prevention and control. Salvador, BA, Brazil, 2015.

Healthcare to Family members	n (%)
Talk with children and grandchildren about the risk of hypertension in descendants	
Yes	44 (34.9)
No	81 (64.1)
Guide family members to measure blood pressure periodically	
Yes	33 (26.2)
No	92 (73.0)
Make separate food for family members	
Yes	60 (47.6)
No	66 (52.4)
Reduces salt for the whole family	
Yes	63 (50.0)
No	63 (50.0)
Notes acceptance of low-salt home-cooked food (n = 63) *	
Yes. No complaining.	21 (33.3)
Yes, but complain	5 (7.9)
Add salt after ready food	21 (33.3)
Do not eat at home	16 (25.4%)

Discussion

The average age of 57.2 years found in this study represents a 'expected' measure, as the prevalence of hypertension is higher in the age group of 55 years or older. In Brazil, especially for women in this age group, the prevalence of the disease reaches 50% .11 The high percentage of hypertensive women of brown and black color is representative of the population of Salvador (81.9%) according to data from the Brazilian Institute of Geography and Statistics.[12]

The low education level identified for women deserves mention, given that the years of study are a good approximation with the socioeconomic level,

which was also low, since most women lived with up to three minimum wages. Cardiovascular disease, including hypertension, is known to be more prevalent in lower-income social classes and lower-educated people.[13] Schooling and socioeconomic conditions interfere with the population's health conditions regarding access to the health system and understanding of the disease and therapy.

The fact that 76.2% live with children and / or grandchildren and 34.1% have family members with a diagnosis of hypertension at home, some of these direct descendants, shows the importance of care provided by them at home for prevention. and disease control in view of its socially and culturally determined role as "responsible for household and family affairs".

Regarding women's care for their disease, the high percentage of adherence to periodic medical follow-up identified in this study may be related to gender behavior. In Brazil, it is observed that women are more willing to participate in activities developed in health services and pay greater attention to preventive and curative actions.[14-15]

The high frequency of ingestion of high sodium foods and the habit of preparing beans with salty meat indicate that women are not adopting a hyposodic diet as recommended for the control of hypertension. Salt intake has been shown to increase blood pressure and a sodium-restricted diet contributes to reduce blood pressure.[1] Thus, guidelines on the consumption of low salt foods should be reinforced in the monitoring of women with hypertension and the extension of this care to family members should be encouraged.

Although most women consumed fat-rich foods and used fried foods to prepare meals less than twice a week, a significant proportion consumed fried and high-fat foods more often. Ingestion of saturated fat is not indicated, taking into account the prevention of obesity, as it increases blood pressure and causes cardiovascular complications.[1,16] Despite the proven protection afforded to chronic diseases by the consumption of fiber-rich foods[17], this habit was reported by only 25.4% of women- four or more times a week. The pattern of fruit and vegetable intake found in this study indicates that there may be some degree of cardiovascular protection for the respondents, as many plant foods are rich in potassium that induces lower blood pressure.[16] Most women did not follow the recommendation of fractioning meals, not eating every 3 hours. Fractionation of daily meals contributes to weight control, lowering serum cholesterol levels, and improving insulin sensitivity and therefore helps prevent cardiovascular disease.[16]

The sedentary lifestyle identified for most women deprives them of the benefits of physical activity such as controlling blood pressure and reducing weight and risk of cardiovascular disease.[18] Physical inactivity in women in the city of Salvador has already been proven, as regular physical activity was found for only 30.0% of them.[11] It is known that there is an association between low level of physical activity and the presence of hypertension and sedentary individuals have a 30% to 50% higher risk of developing this disease.[19]

Walking prevailed as a modality of physical activity performed by most women, which does not depend on equipment, is inexpensive and accessible to the population, thus being more practiced by women, elderly and individuals with low education and obese.[20] Among the various reasons related to physical inactivity, lack of time and emotional problems reported by women deserve

highlighting, as it allows the health team, especially the nurse, to develop actions to cope and overcome these difficulties.

Despite the majority of respondents reporting a history of hypertension, about 50% were unaware of the influence of genetic factors on hypertension. Quantifying each of the genetic and environmental factors is known to be a difficult issue, but genetics can represent the bridge through which environmental factors interact.[5] Ignore this aspect may contribute to prevent susceptible people from developing care related to disease prevention, as well as to those already hypertensive not to extend preventive care to their family members.

As for the care directed to family members, it was observed that most did not have the habit of talking and teaching their children and grandchildren about the prevention of hypertension. Considering that the contribution of genetic factors to the genesis of hypertension is well defined[21], early prevention measures in the family environment are necessary to prevent disease in offspring. Understanding of the disease by the descendants allows greater involvement in the care of their hypertensive family member, as well as self-care, impacting on the empowerment of the family to prevent and control the disease.

It was found in this study that high frequency of women did not guide their descendants to perform blood pressure measurement periodically. This data is relevant since hypertension is a silent disease and the verification of blood pressure is the key element for its early detection and treatment, and consequently for the reduction of complications.[22]

This study highlighted the high percentage of women (47.6%) who prepared different food for other family members. This habit could mean that a "healthier" diet low in fat and sodium would not be shared by the whole family. A possible explanation for this result may be related to the less comprehensive understanding of the health-disease process, which results in behaviors that favor curative care only when the disease is already installed over preventive care.

The fact that only half of the interviewees reduced sodium for the whole family shows that few members benefited from this measure, especially those already diagnosed with hypertension. Thus the consumption of food with low sodium and fat content should be a care for everyone in the household, considering the existence of other family members with hypertension, the inheritance of the disease and the possibility of primary prevention. To the extent that there are family members, possibly young children and grandchildren, there is no doubt that the family's eating pattern plays a key role in the development of healthy eating habits at all stages of life.[23]

Another fact that deserves to be emphasized is the percentage of family members who added salt after ready food, especially when it is known that sodium consumption in Brazil is already at levels above the maximum recommendation for this nutrient in all macroregions and classes. Brazilian income.[24] Given the high frequency (30% to 50%) of salt sensitivity among hypertensive individuals and the custom of the Brazilian population to consume twice the maximum recommended salt content, dietary salt restriction is not only a recommended measure. for hypertensive patients, but for the general population, as it may delay the use of antihypertensive therapy, may

facilitate lowering blood pressure in hypertensive people who use antihypertensive drugs, and may represent reduced cardiovascular morbidity and mortality.

One of the recommendations is that besides reducing sodium in the food, the salt shaker should not be placed on the table to avoid further additions of it.[16]

When discussing family health care, we may think it has cultural, collective, and personal representations that interact to result in a particular way of caring for themselves and others. Families can act as reproducers of behavior, customs and beliefs based on their perception of the health / disease process.

The family can contribute to greater adherence to treatment by individuals with some health problem, as it is the main caregiver of its members especially when it is included as a participant in the health-disease process, as it contributes substantially in the health promotion.[26] The nurse needs to be sensitive to the main factors related to the structure and family dynamics of the individual to direct and share educational actions aimed not only at controlling the disease, but also at primary prevention.

Relationships lived at home can play an important role in the whole process of interaction of the individual with their disease, treatment and adaptation to a new lifestyle and represent the first instance of health care.[27] Home when it is a healthy environment is fundamental for health promotion and disease prevention from the earliest ages. These aspects should be known and considered by health professionals so that the approach of people with hypertension is comprehensive and the guidelines are also directed to family members.

It was found in this study that most women with high blood pressure did not perform the necessary care to control their disease especially regarding the consumption of whole foods and low sodium, diet fractionation and practice of activity. regular physics. Most of them also did not extend family care regarding prevention of this condition such as talking about the need to adopt healthy lifestyles necessary for the prevention and control of the disease, guidance for the periodic checking of blood pressure and salt reduction for the whole family. family. These results raise the question as to why most women do not adopt and extend to their families care for the prevention and control of the disease.

Conclusion

It is evident that health professionals need to know the family reality of the people they care for, recognize the beliefs and barriers to adherence to therapy and, along with them, share a care proposal that can also be extended to all their members. . The nurse, as a member of the health team, has an important role in the monitoring of a hypertensive woman, and should direct her attention beyond the aspects related to the therapy instituted for the "patient", in order to contemplate other implications involved in the control and prevention. of the disease.

References

1. Malachias M, Plavnik F, Machado C, Malta D, Scala L, Fuchs S. 7th Brazilian Guideline of Arterial Hypertension: Chapter 1 - Concept, Epidemiology and Primary Prevention. Arquivos Brasileiros de Cardiologia. 2016;107(3 Suppl 3):1-6. doi:10.5935/abc.20160151.
2. Andrade SSCA, Malta DC, Iser BM, Sampaio PC, Moura L. Prevalência da hipertensão arterial autorreferida nas capitais brasileiras em 2011 e análise de sua tendência no período de 2006 a 2011. Rev. bras. epidemiol. 2014 ; 17(Suppl 1): 215-26.
3. Bernard CR, Bochud M, Devuyst O. The Hypertension Pandemic: An Evolutionary Perspective. PHYSIOLOGY 32: 112–125, 2017. doi:10.1152/physiol.00026.20163
4. Ramírez-Bello J, Pérez-Méndez O, Ramírez-Fuentes S, Carrillo-Sánchez S, Vargas-Alarcón G, Fragoso JM. Genética y genómica de la hipertensión arterial: una actualización. Archivos de cardiología de México, 2011; 81(3): 240-50
5. Valdés MTL, Herrera JAC. Estudios sobre las bases genéticas de la hipertensión Arterial. Revista Cubana de Investigaciones Biomédicas. 2013; 32(1): 8-20.
6. Piccini RX, Facchini LA, Tomasi E, Siqueira FV, Silveira DS, Thumé E, et al. Promoção, prevenção e cuidado da hipertensão arterial no Brasil. Rev. Saúde Pública. 2012; 46(3): 543-50. doi:10.1590/S0034-89102012005000027.
7. Rouquayrol MZ, Silva MGC. **Epidemiologia & saúde.** 7. ed. Rio de Janeiro: MedBook, 2013.
8. Juliana Costa Machado Rosângela Minardi Mitre Cotta Tiago Ricardo Moreira Luciana Saraiva da Silva. Análise de três estratégias de educação em saúde para portadores de hipertensão arterial. Ciênc. saúde colet. 2016; 21 (2): 611-19. DOI: 10.1590/1413-81232015212.20112014
9. Baggio MA, Erdmann AL. La Circularidad de los Procesos de Atención y Cuidado en la Formación de la Atención de "Nos Otros". Rev. Enf. Ref. 2015; serIV(7): 11-20. doi.10.12707/RIV15012.
10. *Gutierrez DMD, Minayo MCS. Produção de conhecimento sobre cuidados da saúde no âmbito da família. Ciência & Saúde Coletiva. 2010; 15 (Suppl 1): 1497-508. doi:10.1590/S1413-81232010000700062*
11. Brasil. Ministério da Saúde. Secretaria de Vigilância em Saúde. Departamento de Vigilância de Doenças e Agravos não Transmissíveis e Promoção da Saúde. Vigitel Brasil 2017: vigilância de fatores de risco e proteção para doenças crônicas por inquérito telefônico : estimativas sobre frequência e distribuição sociodemográfica de fatores de risco e proteção para doenças crônicas nas capitais dos 26 estados brasileiros e no Distrito Federal em 2017 / Ministério da Saúde, Secretaria de Vigilância em Saúde, 2018. 130.: il.
12. Instituto Brasileiro Geografia e Estatística (IBGE) Síntese de indicadores sociais: uma análise das condições de vida da população brasileira. Rio de Janeiro: IBGE, [Internet]. 2010; [acesso em: 11 mar 2016] Disponível em: http://www.ibge.gov.br/home/estatistica/populacao/condicaodevida/indicadoresminimos/sinteseindicsociais2010/SIS_2010.pdf
13. Vathesatogkit P, Woodward M, Tanomsup S, Hengprasith B, Aekplakorn Wichai, Yamwong S, et al. Long-term effects of socioeconomic status on incident hypertension and progression of blood pressure. Journal of hypertension. 2012;30(7):1347-53. doi:10.1097/HJH.0b013e32835465ca.
14. Levorato CD, Mello LM, Silva AS, Nunes AA. Fatores associados à procura por serviços de saúde numa perspectiva relacional de gênero. Ciênc. saúde coletiva. 2014;19(4):1263-74. doi:10.1590/1413-81232014194.01242013
15. Boing AF, Matos IB, Arruda MP, Oliveira MC, Njaine K. Prevalência de consultas médicas e fatores associados: um estudo de base populacional no sul do Brasil. Rev. Assoc. Med. Bras. 2010; 56(1):41-6.

16.Brasil. Ministério da Saúde. Secretaria de Atenção à Saúde. Departamento de Atenção Básica. Estratégias para o cuidado da pessoa com doença crônica: hipertensão arterial sistêmica / Ministério da Saúde, Secretaria de Atenção à Saúde, Departamento de Atenção Básica. – Brasília: Ministério da Saúde, 2013. 128 p.
17.Brasil. Ministério da Saúde. Secretaria de Atenção à Saúde. Departamento de Atenção Básica. Guia alimentar para a população brasileira / Ministério da Saúde, Secretaria de Atenção à Saúde, Departamento de Atenção Básica. 2 ed. Brasília: Ministério da Saúde, 2014. 156 p.
18.Bakker EA, Sui X, Brellenthin AG, Lee DC. Physical activity and fitness for the prevention of hypertension. Curr Opin Cardiol. 2018 Jul;33(4):394-401. doi:10.1097/HCO.0000000000000526.
19.Cichocki M, Fernandes KP, Castro-Alves DC, Gomes MVM. **Atividade física e modulação do risco cardiovascular.** Revista Brasileira de Medicina do Esporte. 2017; 23:21–25. doi:10.1590/1517-869220172301159475
20.Aziz José Luís. Sedentarismo e hipertensão arterial Sedentary lifestyle and hypertension Rev Bras Hipertens. 2014. 21(2):75-82.
21. Adamoli NA, Silva MC, Azevedo MR. Prática da caminhada no lazer na população adulta de Pelotas, RS. Revista Brasileira de Atividade Física e Saúde, Pelotas. 2011;16(2):113-19.
22.Magalhães MEC, Brandão AA, Pozzan R, Campana ÉMG, Fonseca FL, Pizzi OL, Brandão AP. Prevenção da hipertensão arterial: para quem e quando começar? Rev Bras Hipertens. 2010; 17(2):93-97.
23.Neulinger A, Simon J. Food consumption patterns and healthy eating across thehousehold life cycle in Hungary. International Journal of Consumer Studies, 2011; 35(5):538-44. doi:10.1111/j.1470-6431.2011.01015.x
24.Sarno F, Claro RM, Levy RB, Bandoni DH, Monteiro CA. Estimativa de consumo de sódio pela população brasileira, 2008-2009. Rev de Saúde Pública, 2013; 47(3): 571-8. doi:10.1590/S0034-8910.2013047004418.
25. Frisoli T, Schmieder RE, Grodzicki T, Messerli FH. Salt and Hypertension: Is Salt Dietary Reduction Worth the Effort? The American Journal of Medicine. 2012;125(5): 433-39. doi: 10.1016/j.amjmed.2011.10.023.
26.Squarcini CFR, Silva LWS, Reis JF, Pires EPOR, Tonosaki LMD, Ferreira GA. A pessoa idosa, sua família e a hipertensão arterial: cuidados num programa de treinamento físico aeróbio. Rev Kairós. 2011; 14(3): 105-25.
27.Faquinello P, Marcon SS , Waidmann MAP. A rede social como estratégia de apoio à saúde do hipertenso. Rev Bras Enferm, Brasília 2011; 64(5): 849-56. doi.org/10.1590/S0034-71672011000500008.

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