ORIGINAL ARTICLE *DOI: 10.4025/cienccuidsaude.v15i3.28792*

SELF-REPORTED PREVALENCE, RISK FACTORS AND HYPERTENSION CONTROL IN OLDER ADULTS

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ABSTRACT
This study aimed to identify the self-reported prevalence of arterial hypertension and the risk factors, as well as to survey the control practices targeted at elderly patients registered in a Family Health Strategy in Teresina, Piaui, Brazil. This is a descriptive, cross-sectional, quantitative study conducted from May to July 2014, with 126 elderly people, through home interview. Descriptive statistics and the chi-square test were applied to verify associations with significance level of $p<0.05$. The mean age of participants was 70 years (±8.0), most were female (69.8%), with elementary education (58.8%), and low family income (51.6%). Self-reported prevalence of arterial hypertension was 63.5%. There was statistical association between arterial hypertension and the variables age ($p=0.021$) and performing a paid work ($p=0.004$). The main control practice mentioned was the use of antihypertensive medication; however, 16.2% referred irregular use. It was found high prevalence and results revealed difficulties in adherenceto drug treatment and other treatment measures, which requires special attention from professionals, particularly nurses.

Keywords: Hypertension. Elderly People. Family Health. Nursing.

INTRODUCTION

Brazil has been facing at the present time the challenges of the ageingpopulation, resulting from the change in the age structure, which is taking place at an accelerated pace, marked by heterogeneity in different Brazilian regions and by the unfavorable socio-economic context[1].

Aging is a dynamic and progressive process that causes many changes in the body, whether morphological, psychological, functional or biological, resulting in decreased functional capacity and development of chronic non-communicable diseases[2]. The changes stem from the accumulation of damagethroughout life, caused mainly by the interaction between genetic factors and unhealthy habits such as unbalanced diet, smoking, alcohol consumption and physical inactivity[1].

Among the risk factors for the development of chronic diseases, the high blood pressure (hypertension) is the most prevalent[3], being a multifactorial and chronic clinic condition. It is characterized by high and sustained levels of blood pressure, and has a high prevalence, but low control rates. For these reasons, it is one of the most important public health problems, since its morbidity and mortality and treatment costs are high[4]. Moreover, it generates increased risk of comorbid conditions, such as acute myocardial infarction and stroke. In addition, it is often asymptomatic, making it difficult that individuals seek health services for diagnosis and treatment adherence[5].

As the prevalence of hypertension in individuals over 60 is high[6], the big challenge is to know the impact of this disease in this segment of the population, the associated factors and the performed treatment[4], which will contribute to the planning and implementation of effective and quality actions aimed at this population group[7].

In this context, the expansion of the coverage of primary health care services provided by the Family Health Strategy (FHS) has improved the population's access to basic health services, which

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allowed, among other advances, to create bonds between users and the health staff, encouraging a more systematic monitoring and expansion of promotion and prevention activities, adding efforts for the implementation of care guidelines proposed to hypertension[8].

Based on this principle, the authors realized the need for this study in order to identify the self-reported prevalence of hypertension and its risk factors; and to survey control practices among the elderlyregistered at a Health Family Strategy in Teresina, Piaui, Brazil.

The survey of these data will enable the identification of hypertensive elderly people, as well as the factors that influence the prevalence and the adopted control measures, so that one can provide relevant information for health professionals working in the FHS, especially nurses, directing the actions for prevention and control of hypertension.

METHODOLOGY

This is a descriptive, cross-sectional study with a quantitative approach, developed in a FHS based in a Basic Health Unit (BHU) in the city of Teresina, Piaui, Brazil. The said unit belongs to the Centre-North Regional Health Directorate (RHD) and has four teams, among which the FHSwas chosen for the research by lot. This FHS has 660 registered families and develops activities in the afternoon.

The study population consisted of 208 elderly people living in an area linked to the studied FHS. By using the calculation for probabilistic and random sample and by applying the Cochran's correction for finite populations, an initial sample of 115 participants was defined, which was increased by 10% to compensate for possible losses during data collection, resulting in a final sample of 126 older people. A sequentially numbered list was developed, according to the record of the elderly in the FHS, and the number of necessary elements for the sample was drawn through the R (Project for Statistical Computing) software, version 3.0.2.

The inclusion criteria were defined as: being elderly person aged 60 years or older and being registered in the record A. The elderly who had any condition that prevented them to understand the interview script (dementias, mental disorders and/or language disorders) and to participate in the research, referred by family or health team, were excluded.

Data collection took place from May to July 2014 through interviews conducted by researchers previously trained on data collection tools and interview technique. The interviews were carried out directly with the elderly during home visits previously scheduled by community health workers. For data collection, researchers used a semi-structured interview form, with questions related to socio-demographic and economic profile (age, sex, marital status, education, retirement, paid work, family income), to self-reported high blood pressure (yes, no, does not know and time of evolution), the associated risk factors (smoking, alcohol use, physical activity, family history of hypertension, other health problems) and the care practices (use of health service, use of drug treatment, regular use of antihypertensive medication, participation in discussion or support groups, whether they know what to do to control hypertension, control measures used). This last part applies only to participants who reported being hypertensive.

After collecting the data, authors used the software Statistical Package for Social Sciences (SPSS, version 17.0) for Windows, to organize and analyze the data. Quantitative variables were presented using descriptive statistics (mean and standard deviation) and qualitativevariables, by proportion. Factors associated with hypertension were verified by Pearson'schi-square test, considering a significance level of $p < 0.05$.

The study followed the ethical recommendations of Resolution No. 466 of December, 12, 2012. All participants signed an Informed Consent Form. It was assessed by the Ethics Research Committee of the Federal University of Piaui, which gave its assent, under CAAE No. 28793414.4.0000.5214.

RESULTS AND DISCUSSION

Regarding the socio-demographic profile of the sample, it was found that of the 126 elderly respondents, 69.8% were women, with a mean age of 70 years (± 8.0), the majority (56.3%) were in the age group between 60 and 69 years, followed by 28.6%, between 70 and 79 years, and 15.1%, from 80 to 89 years. Most seniors were married

(54%), and widowers and singles represented, respectively, 27.8% and 10.3%. Regarding schooling, 58.8% had only elementary education, 19.8% had no education and only 6.3% had completed higher education.

The prevalence of women can be explained by feminization of old age due to male mortality is higher than female, especially at advanced ages, which gives women greater longevity and ability to develop mental and physical disabilities or referred diseases[9]. This data can also be explained by women's tendency to have greater awareness about diseases and self-care, seeking medical care more often in order to increase the likelihood of diagnosis of diseases[10].

Regarding age, another survey conducted in Brazil revealed the predominance of older people aged from 60 to 69 years[7], that is, young elderly, which can be explained by the fact that population aging in Brazil, unlike the developed countries, began later, from the 1960s, with the fall in fertility rates.

The low educational level that characterized the sample is one of the most important indicators of the health conditions of the population and is closely related to age in Brazil, since many older people of this century did not have study opportunities in youth[11]. For this reason, it is essential to consider the assessment of the level of education as an important factor for promoting health care actions.

In relation to socioeconomic features, 75.4% of the sample was retired, but 24.6% still performed paid work. The family income of the majority (51.6%) was up to two minimum wages, and 24.6% reported family income lower than a minimum wage.

Low education is worrisome in the evaluation of elderly health, because education is one of the determinants of chronic diseases and the lower the education level, generally, the higher the prevalence of these diseases and complications resulting from them[12].

As noted, part of the research participants had low family income and performed some kind of paid work. It is common for the elderly to return or remain in the labor market to help supplement the family income because, in many situations, the pension benefit is not sufficient to cover personal expenses, and this is also a way for the elderly feels useful, keeps busy and is recognized as productive person in a capitalist society[13].

Regarding risk factors, 10.3% of the interviewed elderly were smokers, 9.5% consumed alcohol, 65.9% did not practice regular physical activity, 68.3% reported having a family history of hypertension and 70 6% had at least one other comorbidity, of which the most mentioned were arthritis/osteoarthritis (36.5%), osteoporosis (22.2%) and diabetes (20.6%).

Behaviors and lifestyles have influence on the health of the elderly and among those with greater influence, there is highlight for the lack of physical activity, smoking and alcohol abuse, which directly determine the occurrence of chronic and non-communicable diseases[14]. The practice of regular physical activity during the aging process brings many benefits, such as improved physical activity levels in older people and contributes to maintenance and/or improvement of functional capacity and hence to a healthy aging[15], in addition to promoting well-being.

The probability of acquiring a disease or chronic disability increases over the years[16], so it is frequent thata same old person has multiple morbidities.

The prevalence of hypertension reported by respondents was 63.5% (95% CI: 55.0 to 72.0), i.e., of the 126 seniors, 80 reported hypertension. An important part of hypertensive participants (35%) had the disease for over 10 years. A descriptive, quantitative and time series study whose objective was to observe the evolution of the prevalence of hypertension in the elderly in Brazil between 2006 and 2010 obtainedaverage prevalence of hypertensionover 50%in the five geographical regions of the country in all the years analyzed[1].

Hypertensionhas a high prevalence in Brazil and often has associated comorbidities and a high risk of mortality. It is considered one of the major risk factors for cardiovascular disease, affecting the quality of life of individuals, which implies a negative effect on overall assessment of quality of life[17].

Another fact to note is that this high prevalence reveals that this study population knows about their health status, which also shows that measures fromhealth organizations and professionals in the detection of hypertension have brought results. However, knowledge about the health status does not necessarily change behaviors[8] and this study

says nothing about the of the pressure control level of this elderly people.

Regarding the time of evolution of the disease, it is emphasized the chronicity of the disease. The time of the disease must be observed, because combined with the absence of specific symptoms and long-term complications resulting from the lack of control of the hypertension, it tends to constitute in factors that hinder the treatment adherence and consequent satisfactory control of blood pressure[17].

In the analysis of the prevalence of self-reported hypertension with the socio-demographic and economic characteristics of the population association, it was observed that the prevalence was higher among women, in people younger than 70 years old, among single and/or divorced and with less education, the retirees, among those who do not work and those who have a family income of 1 to 2 minimum wages, with no statistically significant association with age (p = 0.021) and with performing paid work (p = 0.004) (Table 1).

Table 1. Association between self-reported prevalence of hypertension and socio-demographic and economic characteristics of the elderly participants. Teresina-PI, 2014. (n=126)

Variables	Arterial hypertension					p*
	Yes		No			
	n	%	n	%		
Gender						0.650
Female	57	71.2	31	67.4	88	
Male	23	28.8	15	32.6	38	
Age range (in years)						**0.021**
60-69	38	47.5	33	71.3	71	
70-79	26	32.5	10	21.7	36	
80-89	16	20.0	03	6.5	19	
Marital status						0.219
Single/Divorced	45	56.2	23	50.0	68	
Married/Stableunion	11	13.8	12	26.1	68	0.532
Widowed	24	30.0	11	23.9	35	
Schooling						0.697
No schooling	18	22.5	07	15.2	25	
ElementarySchool	49	61.2	25	54.3	74	0.556
High school or more	13	16.2	14	30.4	27	
Retired						0.249
Yes	63	78.8	32	69.6	95	
No	17	21.2	14	30.4	31	
Paid work						**0.004**
Yes	13	16.2	18	39.1	31	
No	67	83.8	28	60.9	95	
Family income (MW)**						0.412
≤ 1	21	26.2	10	21.7	31	
1 – 2	43	53.8	22	47.8	65	
≥2	16	20.0	14	30.4	30	

Legend: *Pearson's chi-square test; **MM: Minimum wage (R$: 720.00)

The age is a risk factor for hypertension, and this is evidenced in this study. The prevalence of risk factors such as hypertension increases with age. However, it is known that despite advancing age increases the risk for chronic diseases, making it a predictor of worse quality of life, when compared to adults, the elderly adjust better to the limitations resulting from the disease[4].

Performing paid work presented statistical association with prevalence of hypertension. However, the maintenance of paid work may have a protective effect by mechanisms of social support similar to those that explain the protective effect of the monthly relationship with friends, because spending time with others provides fundamental relations of cooperation and interactivity, and daily challenges that keep the workeractive and help maintaining the functional capacity[18].

Although the study did not show statistically significant association between the prevalence of hypertension and gender, there was a higher number of cases among women. Thus, one can

relate this higher percentage among women to the greater tendency of womento self-care and to seeking medical care[17], which may also have increased the likelihood of having diagnosed hypertension.

In this sense, the health services should develop programs that encourage elderly men to seek for health services for greater care with health. In this context, the strengthening of the Men's Health Program, proposed by the Ministry of Health, with periodic monitoring of these men, leads tohigher likelihood of access to health services.

The low educational level and low income were not statistically associated with the prevalence of hypertension, although it is observed consistent association betweenhypertension and indicative characteristics of unfavorable socioeconomic conditions, such as low education and low income[10], which may be the result of other factors that affect blood pressure, such as stress, working conditions and poor eating habits, physical inactivity and poor access to health services for diagnosis and treatment of hypertension.

This scenario points to the real need to strengthen public policies of health promotion and disease prevention, especially for the most vulnerable subgroups, so that even in the face of population aging, health indicators can improve[10].

In associating the prevalence of hypertension with the risk factors raised, there was no statistical association with the variables (Table 2), which can be explained by the small sample analyzed. It is known that alcohol abuse, physical inactivity, overweight, family history and smoking can be casually associated with elevated blood pressure levels[12]. This shows the importance of raising this information, as based on that knowledge, professionals can indicate changes in lifestyle for the prevention and treatment of hypertension.

Table 2. Association between prevalence of hypertension and risk factors presented by the elderly participants. Teresina-PI, 2014. (n=26)

Risk factor	Arterial hypertension					p*
	Yes		No			
	N	%	N	%		
Smoker						0.690
Yes	07	8.8	06	13.0	13	
No	43	53.8	22	47.8	65	
Ex-smokers	30	37.5	18	39.1	48	
Alcohol consumption						0.208
Yes	05	6.2	07	15.2	12	
No	58	72.5	28	60.9	86	
Ex-alcoholic	17	21.2	11	23.9	28	
Regular practice of physical activity						0.149
Yes	31	38.8	12	26.1	43	
No	49	61.2	34	73.9	83	
Family history of hypertension						0.155
Yes	56	70.0	30	65.2	86	
No	08	10.0	10	21.7	18	
Do notknow	16	20.0	30	65.2	22	
Comorbidities**						
None	20	25.0	17	37.0	37	0.156
Arthritis/Osteoarthritis	33	41.2	13	28.3	46	0.145
Osteoporosis	21	26.2	07	15.2	28	0.152
Diabetes	19	23.8	07	15.2	26	0.255
Stroke	06	7.5	02	4.3	08	0.387
Heart problems	08	10.0	00	0.0	08	-
Breathingproblems	05	6.2	00	0.0	05	-
Others	15	18.8	08	17.4	23	0.849

Legend: *Pearson's chi-square test; **Multiple choice

The study also found no statistical association between the prevalence of hypertension and the presented comorbidities. It is known that hypertension is associated with increased risk of vascular complications, such as ischemic heart disease, heart failure, left ventricular hypertrophy,

stroke, chronic kidney disease and malignant hypertension[19]. The diagnosis of hypertension is of fundamental importance for the prevention of such comorbidities, mainly because it deals with an elderly population.

Table 3 shows that 78.8% of respondents who reported having hypertension have received outpatient medical monitoring regularly, 100% have made use of antihypertensive medication, but 16.2% reported having made irregular use of the medication; 61.2% have not participated in discussion/support groups and 18.8% said they did not know how to control hypertension.

As for the adopted control measures, adherence to treatment is still problem to be addressed with these patients, as seen in this study. Non-adherence to drug therapy is identified by nurses as an important health problem that affects a great number of elderly people with chronic diseases. It is noticed that forgetfulness, the usual lack of symptoms and lack of motivation are the main factors for non-adherence to drug treatment[18].

Table 3. Data on control practices developed by hypertensive elderly participating in the research. Teresina-PI, 2014. (n=80)

Variables	N	%
Outpatient medical monitoring		
Yes	63	78.8
No	04	5.0
Sometimes	13	16.2
Use ofantihypertensivemedication		
Yes	67	83.8
Yes, butnotregularly	13	16.2
Participation in discussion/support groups		
Yes	31	38.8
No	49	61.2
The patient knows how to control hypertension		
Yes	46	57.4
No	16	18.8
Verylittle	19	23.8
Adoptedcontrolmeasures*		
Hyposodicfood	47	58.8
Physicalactivity	18	22.5
Antihypertensivemedication	80	100.0
Otherways	08	10.0
Total	80	100.0

Legend: *Multiplechoice

The purpose of the medication is mainly to prevent the risk of cardiovascular complications, as these do not cure hypertension, they only control it. Because hypertension is a silent disease, many seniors may not raise awareness about the importance of pharmacological treatment, which makes it important to check whether theyare taking the drugs according to the prescription, even if they have stable values of hypertension.

The control of hypertension is not only related to a healthy lifestyle and to drug treatment, but also to awareness about the disease and related comorbidities. Therefore, a better quality of life of hypertensive individuals can be directly related to their position against the disease and the care taken to control blood pressure[4].

Most respondents reported not participating in discussion groups on the subject. Thus, it is reiterated that health education is a scheduled practice performed by professionals who make up the Family Health team, in which topics are discussed, such as the control measures for hypertension, guidelines on nutrition, physical activity and proper use of medication[4,17]. Therefore, the health team must have knowledge and skills to perform education activities aimed at influencing the behavior of hypertensive patients in obtaining and maintaining these changes[17].

A considerable portion of respondents referred using the health service frequently, a favorable factor in the evaluation of FHS goals. The great approximation of the health professional with the

population and the emphasis on actionstargetedat risk groups and behavioral risk factors allow preventing the onset or maintenance of diseases and comorbidities[17].

It should be noted that older people have difficulties and little motivation for treatment adherence because of the need for changes in lifestyle and by the lack of guidance about the treatment. This leadsthem to follow only the drug therapy with no other kind of health care, which requires special attention from professionals[12].

It is important to note that this study had limitations that prevented larger generalizations because the survey was conducted with a sample of patients monitored by a single FHS team and thus it is not representative of the population. Moreover, it is not a longitudinal study, which does not allow identifying causal associations.

Another limitation of this study was the use of the self-reported information on the presence of hypertension. However, several studies, especially the population-based health surveys, use self-reported information for analysis. Self-reported hypertension is an appropriate indicator with relatively high sensitivity and specificity, and self-reported morbidity is widely used in epidemiological studies as an indicator of health status, especially in older people[18].

FINAL CONSIDERATIOS

It was found self-reported prevalence of hypertension of 63.5% in an elderly population assisted by a FHS team, with a mean age of 70 years old, mostly female, married, with low educational level and family income below two salaries. Hypertension was associated with only two variables: age and performing paid work. As the main control measure mentioned, there was the use of antihypertensive drugs, although some did not use them regularly, showing the difficulties of adhering to drug treatment and other treatment measures, which requires special attention from professionals, especially nurses, regarding other control measures.

This study, despite the limitations due to the use of self-reported information and the sample size, allowed to know the prevalence of hypertension in the studied population, as well as the risk factors and the adopted control measures, which brings support for actions of professionals working in primary care for the planning and development of prevention and control activities, and against complications associated with this disease.

PREVALÊNCIA REFERIDA, FATORES DE RISCO E CONTROLE DA HIPERTENSÃO ARTERIAL EM IDOSOS

RESUMO

Objetivou-se identificar a prevalência referida de hipertensão arterial e os fatores de risco; e levantar as práticas de controle entre idosos adscritos a uma Estratégia Saúde da Família de Teresina, Piauí, Brasil. Estudo descritivo, transversal, quantitativo, realizado de maio a julho de 2014, com 126 idosos, mediante entrevista domiciliar. Utilizaram-se estatística descritiva e o teste Qui-Quadrado para verificar as associações, com nível de significância de p<0,05. A idade média foi de 70 anos (±8,0), maioria mulheres (69,8%), com ensino fundamental (58,8%) e baixa renda familiar (51,6%). A prevalência referida de hipertensão arterial foi de 63,5%. Encontrou-se associação estatística entre a prevalência de hipertensão arterial e as variáveis idade (p=0,021) e ter trabalho remunerado (p=0,004). A principal prática de controle referida foi o uso de medicamentos anti-hipertensivos, mas 16,2% com uso irregular. A prevalência encontrada foi elevada e os resultados evidenciaram as dificuldades de adesão ao tratamento medicamentoso e às outras práticas de tratamento, o que requer atenção especial por parte dos profissionais, em especial do enfermeiro

Palavras-chave: Hipertensão. Idoso. Saúde da Família. Enfermagem.

PREVALENCIA REFERIDA, FACTORES DE RIESGO Y CONTROL DE LA HIPERTENSIÓN ARTERIAL EN ANCIANOS

RESUMEN

El objetivo de la investigación fue identificar la prevalencia referida de hipertensión arterial y los factores de riesgo; y recopilar las prácticas de control entre ancianos adscritos a una Estrategia Salud de la Familia de Teresina, Piauí, Brasil. Estudio descriptivo, transversal, cuantitativo, realizado de mayo a julio de 2014, con 126 ancianos, mediante entrevista domiciliaria. Se utilizaron estadística descriptiva y la prueba Cui-cuadrado para verificar las asociaciones, con nivel de significancia de p<0,05. La edad promedio fue de 70 años (±8,0), mayoría mujeres (69,8%), con enseñanza primaria (58,8%) y baja renta familiar (51,6%). La prevalencia referida de hipertensión arterial fue del 63,5%. Se encontró asociación estadística entre la prevalencia de hipertensión arterial y las variables edad (p=0,021) y tener

trabajo remunerado (p=0,004). La principal práctica de control referida fue el uso de medicamentos antihipertensivos, pero el 16,2% con el uso irregular. La prevalencia encontrada fue elevada y los resultados evidenciaron las dificultades de adhesión al tratamiento medicamentoso y a las otras prácticas de tratamiento, lo que requiere una atención especial por parte de los profesionales, en especial del enfermero.

Palabras clave: Hipertensión. Anciano. Salud de la Familia. Enfermería.

REFERENCES

1. Gottlieb MGV, Schwanke CHA, Gomes I, Cruz IBM. Envelhecimento e longevidade no Rio Grande do Sul: um perfil histórico, étnico e de morbi-mortalidade dos idosos. Rev Bras Geriatr Gerontol. 2011; 14(2):365-80.

2. Ferreira OGL, Maciel SC, Costa SMG, Silva AO, Moreira MASP. Envelhecimento ativo e sua relação com a independência funcional. Texto & Contexto Enferm. 2012; 21(3):513-18.

3. Mendes GS, Moraes CF, Gomes L. Prevalência de hipertensão arterial sistêmica em idosos no Brasil entre 2006 e 2010. Rev Bras Med Fam Comunidade [on-line]. 2014 [citado 2016 ago 20]; 9(32):273-8. Disponível em: http://dx.doi.org/10.5712/rbmfc9(32)795

4. Borim FSA, Guariento ME, Almeida EA. Perfil de adultos e idosos hipertensos em unidade básica de saúde. Rev Soc Bras Clín Méd. 2011; 9(2):107-11.

5. Chrysant SG. Treating blood pressure to prevent strokes: the age factor. World J Cardiol [on-line]. 2013 [citado 2016 ago 14]; 5(3):22-7. Disponível em: http://dx.doi.org/10.4330/wjc.v5.i3.22

6. Allen M, Kelly K, Fleming I. Hypertension in elderly patients recommended systolic targets are not evidence based. Can Fam Physician. 2013 [citado 2016 ago 20]; 59:19-21. Disponível em: http://www.cfp.ca/content/59/1/19.full

7. Sudré MRS, Reiners AAO, Azevedo RCS, Floriano LA. Características socioeconômicas e de saúde de idosos assistidos pelas equipes de saúde da família. Cienc Cuid Saúde. 2014; 14(1):933-40.

8. Costa JMBS, Silva MRF, Carvalho EF. Avaliação da implantação da atenção à hipertensão arterial pelas equipes de Saúde da Família do município do Recife (PE, Brasil). Ciênc Saúde Coletiva. 2011; 16(2):623-33.

9. Instituto Brasileiro de Geografia e Estatísticas [Internet]. Censo Demográfico 2010 [citado 2016 ago 21]. Disponível em: http://tabnet.datasus.gov.br/cgi/tabcgi.exe?ibge/cnv/popuf.def

10. Pimenta FB, Pinho L, Silveira MF, Botelho ACC. Fatores associados a doenças crônicas em idosos atendidos pela Estratégia de Saúde da Família. Ciênc Saúde Coletiva. 2015; 20(8):2489-98.

11. Barros MBA, Francisco PMSB, Lima MG, César CLG. Social inequalities in health among the elderly. Cad Saúde Pública. 2011; 27(Suppl 2):198-208.

12. Reis AFN, Cesarino CB. Fatores de risco e complicações em usuários cadastrados no Hiperdia de São José do Rio Preto. Cienc Cuid Saúde. 2014; 15(1):118-24.

13. Muniz TS, Barros A. O trabalhador idoso no mercado de trabalho do capitalismo contemporâneo. Rev Ciênc Humanas Soc. 2014; 2(1):103-16.

14. Geib LTC. Determinantes sociais da saúde do idoso. Ciênc Saúde Coletiva. 2012; 17(1):123-33.

15. Benedetti TRB, Mazo GZ, Borges LJ. Condições de saúde e nível de atividade física em idosos participantes e não participantes de grupos de convivência de Florianópolis. Ciênc Saúde Coletiva. 2012; 17(8):2087-93.

16. Jobim FARC, Jobim EFC. Atividade física, nutrição e estilo de vida no envelhecimento. Unopar Cient Ciênc Biol Saúde. 2015; 17(4):298-308.

17. Pierin AMG, Marroni SN, Taveira LAF, Benseñor IJM. Controle da hipertensão arterial e fatores associados na atenção primária em Unidades Básicas de Saúde localizadas na Região Oeste da cidade de São Paulo. Ciênc Saúde Coletiva. 2011; 16(Supl.1):1389-400.

18. D'Orsii E, Xavier AJ, Ramos LR. Trabalho, suporte social e lazer protegem idosos da perda funcional: Estudo Epidoso. Rev Saúde Públ. 2011; 45(4):685-92.

19. Alves-Silva LS. Hipertensão arterial sistêmica e morbidade cardiovascular: foco na epidemiologia no Brasil. Rev Bras Hipertens. 2014; 17(3-4):163-8.

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Submitted: 07/08/2015
Accepted: 08/09/2016