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INTEGRATIVE REVIEW ARTICLE

EATING HABITS OF HYPERTENSIVE PEOPLE FROM THE PERSPECTIVE OF NURSING: INTEGRATIVE REVIEW

HÁBITOS ALIMENTARES DOS HIPERTENSOS SOB A ÓTICA DA ENFERMAGEM: REVISÃO INTEGRATIVA

HÁBITOS ALIMENTARES DE LOS HIPERTENSOS SOBRE LA ÓPTICA DE LA ENFERMERÍA: REVISIÓN INTEGRADORA

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ABSTRACT

Objective: to analyze in the literature eating habits of hypertensive people from the perspective of nursing. ***Method***: literature review in order to answer the research question **<< *What are the eating habits of hypertensive people from the perspective of nurses?* >>**. The search was conducted in the database Latin American and Caribbean Health Sciences/LILACS, from 2007 to 2012, using the keywords: "Hypertension", "Eating Habits" and "Role of Professional Nursing". For the analysis of the eight selected articles, the units of meaning were sought. ***Results***: three themes emerged from the analysis: 1-Salt, 2-Fruits/vegetables and 3-Fats. Insufficient consumption of healthy foods like fruits, vegetables and mono or polyunsaturated fats. Furthermore, the addition of salt and excess saturated fats were common at meals. ***Conclusion***: health education strategies in nursing practice should be valued in promoting healthy eating habits of hypertensive people. ***Descriptors***: Eating Habits; Hypertension; Public Health Nursing.

RESUMO

Objetivo: analisar na literatura os hábitos alimentares dos hipertensos sob a ótica da enfermagem. ***Método***: revisão de literatura com vistas a responder a questão de pesquisa << ***Quais os hábitos alimentares dos hipertensos sob a ótica do enfermeiro?*** >>. Foi realizada a busca na base de dados Literatura Latino-Americana e do Caribe em Ciências da Saúde/LILACS, no período de 2007 a 2012, empregando os descritores: "Hipertensão", "Hábitos Alimentares" e "Papel do Profissional de Enfermagem". Para a análise dos oito artigos selecionados, buscou-se os núcleos de sentido. **Resultados:** da análise emergiram três temas: 1-Sal, 2-Frutas/verduras e 3-Gorduras. Destacou-se o consumo insuficiente de alimentos saudáveis, como frutas, verduras e gorduras mono ou poli-insaturadas. Além disso, a adição do sal e o excesso de gorduras saturadas eram comuns nas refeições. ***Conclusão***: as estratégias de educação em saúde na prática do enfermeiro devem ser valorizadas na promoção de hábitos alimentares saudáveis dos hipertensos. ***Descritores***: Hábitos Alimentares; Hipertensão; Enfermagem em Saúde Pública.

RESUMEN

Objetivo: analizar en la literatura, los hábitos alimentares de los hipertensos sobre la óptica de la enfermería. ***Método***: revisión de literatura para responder la pregunta de la investigación << ***¿Cuáles son los hábitos alimentares de los hipertensos sobre la óptica del enfermero?*** >>. Fue realizada la búsqueda en la base de datos Literatura Latino-Americana y del Caribe en Ciencias de la Salud/LILACS, en el período de 2007 a 2012, empleando los descriptores: "Hipertensión", "Hábitos Alimentares" y "Papel del Profesional de Enfermería". Para el análisis de los ocho artículos seleccionados se buscaron los núcleos de sentido. ***Resultados***: del análisis surgieron tres temas: 1-Sal, 2-Frutas/verduras y 3-Gorduras. Se destacó el consumo insuficiente de alimentos sanos como frutas, verduras y gorduras mono o polinsaturada. Además de eso, la adición de sal y el exceso de gorduras saturadas eran comunes en las comidas. ***Conclusión:*** las estrategias de educación en salud en la práctica del enfermero deben ser valorizadas en la promoción de hábitos alimentares sanos de los hipertensos. ***Descriptores***: Hábitos Alimentares; Hipertensión; Enfermería en Salud Pública.

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INTRODUCTION

Arterial hypertension is a clinical syndrome, characterized by elevated blood pressure levels equal or greater than 140 millimeters of mercury of systolic and 90 mm of mercury diastolic blood pressure in at least two subsequent measurements obtained on different days, or in resting conditions at a quite room.[1] It is one of the most prevalent health problems today representing the most common type of morbidity in the population, reaching more and more adult people, especially the elderly, and young adults estimated to reach approximately 22% of the population above 20 years old.[2]

Hypertension is the leading cause of death worldwide and the most common cause of an outpatient visit. It affects a quarter of an adult population, reaching 60 million people in the US and one billion people worldwide. It is the treatable factor most easily recognizable of stroke, acute myocardial infarction, heart failure, peripheral vascular disease, aortic dissection, atrial fibrillation and renal disease in terminalstage.[3]

The female has a greater tendency to present arterial hypertension due to changing dietary habits and routine of life, such as leaving home to work (professional functions) and the housewife, mother and wife role. Hypertension has high morbidity and mortality in the elderly due to the anatomical and physiological changes of smooth muscle and connective tissue of the blood vessels related to aging, predominantly from 50 years old, which leads to a progressive increase in stiffness of the arteries, causing reduction of its distensibility and a continuous increase in blood pressure. Family history is a non-modifiable, independent risk factor, especially in first-degree relatives with coronary heart disease.[2]

Lower socioeconomic status of people have a higher prevalence of hypertension and risk factors for high blood pressure, and increase risk of injury in target organs and cardiovascular events. The associated factors include the consumption of salt and alcohol intake, increased body mass index, psychosocial stress, less access to health care and education.[4]

The consumption of alcohol is a contributing factor to high blood pressure, in the rate of two millimeters of mercury for every thirty milliliters of ethanol ingested daily. Another risk factor for hypertension is obesity, increasing the cardiac output, blood volume and peripheral resistance, being responsible for the endothelial dysfunction through the mechanisms of increased vasoconstriction and vasodilation reduced. However, maintaining proper weight is essential for reducing and preventing clinical complications such as hypertension, dyslipidemia and diabetes mellitus.[2]

Smokers should be advised to stop smoking because tobacco is a risk factor for coronary heart disease, cerebrovascular accident (CVA) and evolution of hypertensive nephrosclerosis to terminal nephropathy. Blood pressure temporarily increases 10 to 15 millimeters of mercury after each cigarette. Smokers of more than 20 cigarettes per day often have higher blood pressures.[3]

Adherence to medication and costs are significant barriers to control hypertension. To facilitate patient adherence, it should be guiding them on their own target blood pressure levels and monitor the effectiveness of therapy at home.[3] The medicines available in the health system network meet the most hypertensive and in most cases needs health actions prioritize the control of the medication to the detriment of other control measures.[5]

Men worry about the possibility that the medication will cause erectile dysfunction, since studies show that the thiazide diuretics are associated with most cases of male sexual dysfunction.[3] The antihypertensive diuretics and analgesics are used. Diuretics can be distributed in thiazide (hydrochlorothiazide) and loop (furosemide); anti-hypertensive on adrenergic inhibitors (methyldopa, atenolol, propanolol), calcium channel blockers (nifedipine) and Converting Enzyme inhibitors of angiostensina - ECA (captopril and enalapril); analgesics for aspirin.[2]

Non-pharmacological treatment includes weight control, change in eating pattern, moderation in alcohol consumption, regular physical exercise, reduced salt intake and abandonment of smoking.[4] Intake of adequate food is important to control high blood pressure, necessary to change dietary habits favoring a better metabolic control of body weight and blood pressure. However, these habits usually have their bases fixed within the family. In childhood, they are difficult to be modified, which makes the important intervention of the nutritionist to raising awareness and people´s empowerment, considering the psychological, socio-cultural, educational and economic aspects.[6]

Food habits of hypertensive people should include reducing the amount of salt and restriction of industrial sources of salt: sauces, powdered soups, sausages, preserves, canned, smoked and salty snacks, giving

preference for natural seasonings such as lemon, garlic, parsley and chives, replacing the industrialized; reduction of high caloric density foods, replacing sweets and sugar derivatives for complex carbohydrates and fruit, reducing the consumption of sugary drinks and giving preference to non-caloric sweeteners; including at least five servings of fruits/vegetables in the daily diet plan with an emphasis on vegetables or citrus fruits and whole grains.[4]

For hypertensive people, it is important to opt for foods with reduced fat, eliminating hydrogenated fats ("trans") and preferring monaural or polyunsaturated, present in sources of plant origin, except palm and coconut; adequate intake of calcium by the use of dairy products, preferably low-fat; search pleasant and palatable way of preparing food: baked, raw and grilled; eating plan that meets to the demands of a healthy diet, control of body weight, personal preferences and purchasing power of the individual/family.[4]

The recommended diet for hypertension is four or five servings of fruit, four or five servings of vegetables and two to three servings per day nonfat dairy, less than 25% fat. Vegetarian diets can cause a slight decrease in systolic blood pressure in light hypertensive.[4]

The nurse of the family health strategy has a fundamental role on the direction and monitoring of hypertensive patients in their area, because they know their clients through the systematization of their actions, and their concern to nursing consultation and promotion of monthly educational groups in order to establish strategies for better control of hypertension.[7]

OBJECTIVE

♦ To analyze in the literature, eating habits of hypertensive from the perspective of nursing.

METHODOLOGY

It is an integrative literature review, with the following steps: preparation of the guiding question, literature search, data collection; critical analysis of the included studies; discussion of the results; and presentation of an integrative review.[8]

To guide the present review, the following research question was formulated << **What are the eating habits of hypertensive people from the perspective of nurses?** >> The search of the studies was conducted between April and June 2012, by the Virtual Health Library (BVS), Latin American and Caribbean Health Sciences database (LILACS), using the keywords: "*Hypertension*", "*Eating Habits*" and "*Role of Professional Nursing*".

As inclusion criteria, from the previous reading of the abstract, it was decided that the article online should have been published between 2007 and 2012; be original; discussing the issue investigated, considering the eating habits of hypertensive people relevant to the nurse approach; providing full texts in Portuguese. There were excluded dissertations, monographs, book chapters and articles that after reading the abstract did not address the main issue. The instrument used included the following information: title, authors, publication, magazine, objective, methodology and key results.

After reading the titles and abstracts, the selected studies were analyzed with the help of an already validated instrument, evaluating data relating to the identification of the original article, methodological characteristics of the study, assessment of the methodological rigor of interventions measured, and the results found in articles to the journal, author, study and the level of evidence.[9] Finally, the text was separated in units (categories) through thematic analysis and reading the material.[8]

RESULTS AND DISCUSSION

According to the keywords used, there were 23 articles found, of which ten were only abstracts and five did not meet the search criteria described in the methodology. The eight articles selected for this study in LILACS database, were the Revistas de Nutrição, Revista de Cardiologia, Revista Brasileira de Hipertensão, Revista de Pediatria, Revista Brasília Médica, Revista SOCERJ e Revista de Saúde Pública. All research are a quantitative approach and most of them showed evidence of level IV. It was observed that specific articles of the nursing area were not found (Figure 1).

Title	Authors	Publication	Magazine	Objective	Method	Level of evidence	Key Results
Eating habits and practices of hypertension and diabetes: Rethinking care from primary care.	Cotta RMM, Reis RS, Batista KCS, Dias G, Alfenas RCG, Castro FAP.	2009	Revista de Nutrição	To identify inappropriate eating habits presented by hypertensive and diabetic users of the family health strategy, Teixeira (MG), aimed at developing health intervention strategy.	Quantitative Descriptive	Level 4	With inadequate dietary practices observed in the study - as low fractionation meals, high daily per capita consumption of sugar, salt and oil, low water intake.
Food consumption, blood pressure and metabolic control in diabetic hypertensive elderly.	Martins MPSC, Gomes ALM, Martins MCC, Mattos MA, Souza Filho MD, Mello DB, Dantas EHM.	2010	Revista brasileira de Cardiologia	To evaluate the association between inadequate dietary intake and high levels of blood pressure, blood glucose and serum lipids in diabetic hypertensive elderly and inserted in ESF treated at a health center in Terezinha (PI).	Quantitative	Level 4	Inadequate eating habits are related to increase glucose levels and serum lipids and high blood pressure in the group of assessed elderly.
Nutritional profile of hypertensive people accompanied by HIPERDIA in a UBS city Paraná	Piati J, Felicetti CR, Lopes AC.	2009	Revista Brasileira de Hipertensão	To assess nutritional status and to know eating habits and sociodemographic profile of the patients, in order to propose strategy aimed at control and/or prevention of cardiovascular complications, improving the quality of life of these individuals.	Quantitative Descriptive	Level 4	It was concluded that the appropriate nursing care was not being done properly and it is suggested effective nutritional counseling by nutritionists to ensure the control and/or prevention of cardiovascular complications and hence a better quality of life for this population.
Prevalence of hypertension and interrelationships with overweight, obesity, food intake and physical activity in students from public schools in Caxias do Sul.	Hoffmann M, Silva ACP, Siviero J	2009	Revista de Pediatria	To investigate the prevalence of hypertension and interrelation with overweight and obesity, food intake and physical activity in students from public schools in Caxias do Sul.	Quantitative Descriptive	Level 4	The prevalence of hypertension found in adolescents evaluated have shown the need for greater attention to health of this population.

Dietary intervention effect on risk factors associated with diabetes mellitus and hypertension in sedentary elderly.	Martins MPSC, Martins MCC, Souza Filho MD, Mattos MA, Gomes ALM, Mello DB, Dantas EHM.	2010	Revista BSBM-BRASILIA MÉDICA	To evaluate the effect of dietary intervention on risk factors associated with diabetes mellitus and hypertension in elderly inserted in the Family Health Program, attended in a health center in Teresina, PI.	Quantitative	Level 4	The diet prescribed to patients was effective in controlling fasting blood glucose and glycated hemoglobin. Additionally, it resulted clinical improvement of systolic blood and diastolic blood pressure, triglycerides and weight control.
Qualitative and Quantitative Analysis of the Food Standard of Hypertensive population with Metabolic Syndrome	Casanova MA, Medeiros FJ, Cohen C, Neves MF, Oigman W.	2008	Revista SOCERJ	To analyze the food, quantitative and qualitative consumption of hypertensive patients with and without metabolic syndrome treated at a university hospital.	Quantitative	Level 4	The macronutrient intake is deficient qualitatively while the sodium and cholesterol intake exceeded the maximum recommended amount of use, especially in the group with MS.
Health behaviors among hypertensive eardely, Brazil, 2006	Costa MFFL, Peixoto SV, César CC, Malta DC, Moura EC.	2009	Revista de Saúde Pública	To estimate the prevalence of unhealthy behaviors and other cardiovascular risk factors among older adults with self-reported hypertension and comparing them with non-hypertensives.	Quantitative	Level 3	The results suggest that unhealthy behaviors persist among older adults after diagnosis of hypertension, except for smoking.
Hypertensive dietary adequacy in relation to dietary approach to hypertension	Gomes GJ, Seyffarth AS, Nascimento MAB.	2008	Comunicação em Ciências da Saúde	Check the diet adequacy of hypertensive people in relation to the Dietary Approach to Hypertension and factors that may contribute to the intake of saturated fat, fruits, vegetables, dairy products.	Quantitative	Level 4	Inadequate consumption of food groups: saturated fat, fruits, vegetables, dairy products in relation to the recommendations. It was verified that only the income variable influence on the consumption of fruits and vegetables.

Figure 1. Selection of articles found in LILACS databases according to the established inclusion criteria.

The articles described on hypertension control measures and adherence of hypertensive, highlighting among them the eating habits of hypertensive, of which three

themes emerged: Theme 1- salt consumption among hypertensive, Theme 2- consumption of fruits and vegetables and Theme 3 - fat intake.

Theme 1- Salt consumption among hypertensive

The high salt intake is associated to high blood pressure and development of cardiovascular diseases. On average, every reduction of 3g of salt, there is 5 mmHg decrease in systolic blood pressure. However, the reduction in salt intake should be used as a practice combined with other healthy eating habits enhancing their benefits.[6]

The development of hypertension due to salt intake is related to a genetic defect of renal tubule cells, causing retention of sodium and water and thus increasing the cardiac output and consequently the blood pressure.[2]

The restriction on salt consumption shows numerous benefits for both normotensive and for hypertensive, such as: lower blood pressure, lower prevalence of cardiovascular complications, smaller increase in blood pressure with age, ability to prevent high blood pressure and myocardial hypertrophy regression.[4]

Salt consumption in Brazil is high, exceeding the maximum recommended in all regions of the country and in all income strata, and even after the diagnosis of hypertensive disease people have unhealthy behaviors. The habit of adding salt to food, even occasionally, is still a practice of hypertensive patients, especially the elderly.[10]

Despite most hypertensive people confirm avoid salt, when assessing the monthly household consumption, the amount exceeds the recommended by the Brazilian Hypertension Guideline reaching a daily per capita of 22,63g in hypertensive people.[6] A person is healthy when ingesting up to 6 g of salt a day including the salt already present naturally in foods.[4]

Theme 2- Consumption of fruits and vegetables among hypertensive

Diet with fruits and vegetables presents appreciable amounts of potassium, minerals that are essential for the regulation of intracellular and extracellular fluids, providing a favorable effect on the lowering of blood pressure and stroke.[4]

The consumption of fruits and vegetables in the diet is important because they constitute sources of minerals, vitamins, dietary fiber, antioxidants, phytochemicals that protects the body against premature aging, atherosclerosis and some types of cancer.[11]

Fruits and vegetables have complex carbohydrates, with intact natural fiber, which have distinct advantages over simple carbohydrates, such as lower glycemic index, the greater satiety and binding properties with cholesterol. The dietary fiber, especially soluble, have a beneficial effect by reducing total cholesterol and LDL levels, and improving the tolerance of glicose.[13]

The food of the hypertensive population is inadequate, reduced to these food groups. There are even estimates that the population with incomes above five minimum wages appears most critical food diagnosis. That is, it was observed that for individuals who earned more than five minimum wages a chance of fruit intake were 17.62 times ($p=0.021$) and vegetables were 7.87 times ($p=0.030$) higher than among those earning one to three minimum wages.[1]

Among hypertensive people, food has inadequate qualitative and quantitative aspects, which is worrisome because food errors put a risk to control their disease, and may contribute to the worsening of it. It was observed that the higher the consumption of food by the participants, the lower the values of systolic and diastolic blood pressure found, which was also a reduction in hemoglobin glycation with increased consumption of vegetables, and a positive association between increased levels of triglycerides and increased consumption of cereals.[11]

Thus, it is necessary to program strategies and complementary actions, in particular in health centers that promote nutrition education and dietary advice in order to support the necessary changes in the diet of the population standard for consumption of natural foods rich in fiber and micronutrients as whole grains, fresh vegetables and fruits.[1]

Theme 3 - Fat intake among hypertensive

Foods high in saturated fat or calories are causative factors of obesity and overweight representing a risk factor for high blood pressure because they increase blood volume, cardiac output, the blood pressure values and is associated with the development of cardiovascular disease.[2]

A large proportion of hypertensive patients are overweight and excess abdominal fat presenting more than three risk factors for high blood pressure, among them there are the insufficient physical activity during leisure, inadequate food consumption and obesity.[2,6,10 14]

In food intake, hypertensive people have an important consumption of fatty foods at

meals, especially for the daily consumption of lard, margarine, fried foods and cheese that besides presenting high fat content also are high in sodium.[2] It is also observed predominantly among the vegetable oil users, the association between use of lard in the main meals.[6]

The usual intake of meat with excess fat is another hypertensive dietary factor that leads to overeating. This habit is usually different in genders, with a prevalence twice as high among men than women, difference to be considered in policies to reduce consumption.[10]

The hypertensive population has an insufficient intake of monounsaturated fats or polyunsaturated and inadequate saturated fats, worrying situation because the quantities consumed amount are more than twice the recommended.[12] Increased intake of saturated fatty acids, trans fatty acids and cholesterol Dietary are associated with increased LDL. The consumption of trans fatty acids also produces a decrease in HDL, while the monounsaturated and polyunsaturated fatty acids are considered beneficial, since the monounsaturated are associated with decreased total cholesterol and increased HDL and polyunsaturated are associated to reduction of serum triglycerides, improved platelet function and decreased blood pressure in hipertensive.[12]

Proper diet to control hypertension should be based on a healthy diet rich in fruits, vegetables, fiber, dairy products with low-fat, calorie-restricted foods and those containing saturated fats and cholesterol. Weight control, regular physical exercise, moderate consumption of alcohol, coffee or drinks that contain caffeine, the abolition of smoking and stress management improves quality of life and reduce blood pressure.[2]

FINAL REMARKS

The study showed that most hypertensive presented inadequate consumption of fruits and vegetables. It was also found that most added salt to meal and monthly consumption was higher than recommended by Hypertension Brazilian Guidelines. Hypertensive fatty foods showed an insufficient intake of mono or polyunsaturated and inadequate fat saturated fats.

According to analysis of the articles, it was found that the studied population recognize of primary prevention measures, however having difficulties in adopting healthy habits, being a big problem, reinforcing the need to develop health education works and strategies for transforming this reality.

The results reinforce the importance of incentive to reduce the amount of fat intake among hypertensive patients, emphasizing the decreased intake of saturated fats, present mainly in foods of animal origin; encourage consumption of foods naturally high in fiber and micronutrients such as whole grains, vegetables, fresh fruit and vegetables that will lead individuals to a healthy lifestyle with a future without complications.

In this sense, it is highlighted the importance of nurses adequately advise on healthy eating habits during the care of hypertensive patients. Considering the lack of specific studies of nursing, it is important to encourage research to support and direct the professional practice.

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