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RESEARCH PAPER (ORIGINAL)
ARTIGO DE INVESTIGAÇÃO (ORIGINAL)

Knowledge about high blood pressure among hypertensive individuals in a family health unit

Conhecimento dos utentes com hipertensão arterial de uma unidade de saúde familiar sobre a sua patologia

Conocimiento de los pacientes con hipertensión arterial en una unidad de salud familiar sobre su patología

Clara Lucília Botelho Ramos*; Lisete Amélia Ribeiro de Jesus**; Ana Maria Teixeira Santos Souto***; Ana Luísa Couto Almeida Santos****

Abstract

Background: High blood pressure (HBP) is the dominant risk factor for cardiovascular diseases. Basic health knowledge is the first dimension of health literacy (LS), which in Portugal presents a disturbing level, thus becoming a public health problem.
Objective: To assess the level of knowledge about HBP among individuals with this condition and identify potentially related variables.
Methodology: Cross-sectional descriptive study conducted in a non-probabilistic sample of 307 individuals selected by convenience from 3050 hypertensive patients registered in a family health unit (USF). For data collection, a questionnaire was used to assess the knowledge and attitudes of individuals with HBP regarding their condition.
Results: Twenty-seven percent possess a very good level of knowledge. A statistically significant relationship was found between level of knowledge and age group (p = 0.002), education level (p = 0.000), and attitude toward treatment (p = 0.004); and between attitude toward treatment and control of disease (p = 0.050).
Conclusion: Nurses should persist in empowering patients and intervene more closely in the oldest population.

Keywords: hypertension; knowledge; attitudes; health literacy

Resumo

Enquadramento: A hipertensão arterial (HTA) é o fator de risco de doença cardiovascular com maior prevalência. O conhecimento básico em saúde é a primeira dimensão da literacia em saúde (LS), que, em Portugal, apresenta um nível problemático considerando-o um problema de saúde pública.
Objetivo: Avaliar o nível de conhecimentos sobre HTA dos utentes hipertensos e identificar variáveis com as quais possam estar relacionados.
Metodologia: Estudo descritivo-exploratório transversal. De 3050 utentes hipertensos inscritos numa unidade de saúde familiar (USF), 307 constituíram a amostra, determinada de forma não probabilística e por conveniência. Como instrumento de colheita de dados utilizou-se um questionário que avalia conhecimentos e atitudes destes utentes face à sua patologia.
Resultados: Vinte e sete por cento apresentam conhecimentos de nível muito bom. Verificou-se relação estatisticamente significativa entre nível de conhecimentos e grupo etário (p = 0,002), escolaridade (p = 0,000) e atitude face ao tratamento (p = 0,004); e atitude face ao tratamento e controlo da doença (p = 0,050).
Conclusão: Os enfermeiros devem trabalhar a capacitação dos utentes, intervindo de forma incisiva na população mais idosa.
Palavras-chave: hipertensão arterial; conhecimento; atitude; literacia em saúde

Resumen

Marco contextual: La hipertensión arterial es el factor de riesgo de enfermedad cardiovascular (HTA) con mayor prevalencia. El conocimiento básico de la salud es la primera dimensión de la alfabetización en la salud, la cual en Portugal presenta un nivel problemático y se la considera un problema de salud pública.
Objetivo: Evaluar el nivel de conocimiento de los pacientes hipertensos sobre HTA e identificar variables que puedan estar relacionados.
Metodología: Estudio descriptivo-exploratorio transversal. De los 3050 pacientes hipertensos, 307 constituyeron la muestra, no probabilística y por conveniencia. Se utilizó un cuestionario para evaluar conocimiento y actitudes.
Resultados: Veintisiete por ciento tiene muy buen nivel de conocimiento. Se verificó una relación estadísticamente significativa entre nivel de conocimiento y grupo de edad (p = 0,002), escolaridad (p = 0,000) y actitud hacia el tratamiento (p = 0,004); y actitud hacia el tratamiento y control de la enfermedad (p = 0,050).
Conclusión: Los enfermeros deben trabajando en la formación de los pacientes, con más empeño en la población de edad avanzada.

Palabras clave: hipertensión; conocimiento; actitudes; alfabetización en salud

*MSc., Nurse Specialist, ACeS Douro I, 5000-524, Vila Real, Portugal [claralbr80@gmail.com]. http://orcid.org/0000-0001-8432-6240. Contribution to the article: literature search, data collection, data analysis and discussion, writing of the article. Address for correspondence: Rua dos Três Lagares - Mateus, 5000-577, Vila Real, Portugal.
**MSc., Nurse Specialist, ACES Douro I, Marão e Douro Norte, USF Fénix, 5000-577, Vila Real, Portugal [lisetejesus83@gmail.com]. http://orcid.org/0000-0002-7345-7605. Contribution to the article: literature search, data collection, data analysis and discussion, writing of the article.
***MSc., Nurse Specialist, ACES Douro I, Marão e Douro Norte, USF Fénix, 5000-577, Vila Real, Portugal [anasouto40@gmail.com]. http://orcid.org/0000-0002-3659-8898. Contribution to the article: literature search, data collection, data analysis and discussion, writing of the article.
****MSc., Nurse Specialist, ACES Douro I, Marão e Douro Norte, USP, 5000-577, Vila Real, Portugal [nitaalmeidasantos@gmail.com]. http://orcid.org/0000-0002-8458-6162. Contribution to the article: literature search, data collection, statistical treatment and assessment, data analysis and discussion.

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Introduction

Cardiovascular diseases are the leading cause of death in Portugal (Direção-Geral da Saúde [DGS], 2019). High blood pressure (HBP), as a chronic disease, constitutes the dominant risk factor and a relevant public health problem (Ferreira, Graça, & Calvinho, 2016). The pilot phase of the European Health Examination Survey estimated an incidence of HBP in individuals between 25 and 64 years of age, 33.1% men and 22.8% women. In Portugal, the 5th National Health Survey, conducted in 2014, projected a 24.5% incidence of HBP (Rodrigues et al., 2017). However, many health service users do not know their condition (Praça, 2013). According to Prior, Baía, Martins, Lopes, and Vieira (2001), individuals with HBP should understand the factors that influence their disease and can only thus collaborate actively toward health promotion and disease prevention.

The World Health Organization (1998) defines health literacy (HL) as the set of cognitive and social skills and the individual's ability to obtain, interpret, and understand basic health information and services in a way that promotes health. Kickbusch, Pelikan, Apfel, and Tsouros (2013) identified four dimensions for HL, and the first is basic health knowledge. In this sense, it is understood that a good level of knowledge about their condition will provide to individuals with HBP the necessary literacy to manage their health/disease.

The objectives of this study are assessing the level of knowledge about HBP among patients with this condition and identifying potentially related variables, such as gender, age group, education level, time of disease evolution, attitude toward treatment, and control of disease.

Background

According to the European Society of Cardiology (ESC)/European Society of Hypertension (ESH) Guidelines (Williams et al., 2018), the general incidence of HBP in adults was around 30 to 45% in 2015, with a global incidence according to age of 24% in men and 20% in women, thus constituting a major risk factor of cardiovascular diseases and premature death. In line with the same report, HBP becomes progressively more common as age advances, with an incidence above 60% in people older than 60. An estimated 15-20% increase of people with HBP will occur until 2025, hitting close to 1.5 bilion.

The Portuguese Hypertension and Salt Study (Sociedade Portuguesa de Hipertensão, 2012) states that the incidence of HBP in Portugal is 42.2% in adults, with a quadrupled percentage of individuals with controlled HBP in the last decade. It also points out that 57.4% of individuals have uncontrolled HBP, and 23.2% are unaware of having the disease.

Amorim, Caldas, and Roca (2019) suggest that this condition should, in most cases, be managed in primary health care settings, being the most common chronic disease at this level of health care. Thus, nurses play a fundamental role in improving the HL of patients, providing them with reliable and accurate knowledge about the disease and its complications and treatments. Patients should possess knowledge to adopt healthy life habits, such as a varied, well-balanced, potassium-rich diet; regular and continuous physical exercise; weight control within normal parameters; an appropriate waist circumference; limited alcohol consumption; low salt intake; and smoking cessation (DGS, 2013; Santos et al., 2018).

Ferreira et al. (2016) found that it was necessary to improve adherence to therapy, especially regarding physical exercise and diet. Therefore, attention should be focused on these determinants to increase the effectiveness of HBP treatment. The authors also suggest the need for personalized education and the participation and empowerment of citizens for HBP management.

Hypotheses

H 1 - The level of knowledge about HBP is related to gender, age group, education level, and time of disease evolution.

H 2 - The level of knowledge about HBP is related to the attitude toward treatment.

H 3 - The level of knowledge about HBP is related to the control of disease.

Methodology

A descriptive, exploratory, and cross-sectional study was conducted with a quantitative approach. The sample was characterized using descriptive statistics and composed of 307 individuals, corresponding to 10% of a population of 3050 health service users with HBP registered in a family health unit (USF) of northern Portugal. Using non-probabilistic sampling by convenience, the sample included all patients with HBP who were assisted in the USF between October and December 2018. The inclusion criteria were: being more than 18 years old, no manifestation of diagnosed cognitive disability, and consent to participate in the study voluntarily.

The instrument used for data collection, with authorization of its authors, was the questionnaire Hipertensos: Que conhecimentos? Que atitudes? developed by Prior et al. (2001), consisting of 18 questions for knowledge evaluation and four questions related to attitudes. It was found, though, that they were only questions about adherence to medication.

The dependent variable was knowledge about HBP, ordinal variable evaluated through the first 17 questions of the questionnaire with a four-level scale (*very good*, *good*, *sufficient,* and *insufficient*), according to the score given to each question (by the authors): *very good* for a score higher than 90, *good* for a score between 76 and 90, *sufficient* for a score between 60 and 74, and *insufficient* for less than 60.

The independent variables were gender, male and female; age group, variable resulting from grouping ages into three types (15 up to 44 years old; 45 up to 64 years old; and 65 years old or older); education level, categorical variable distributed by five types (illiterate; primary school completed; 9th grade; high school; and higher education); time of disease evolution, categorical variable distributed by three types (<10 years; 10 to 20 years; and >20); attitude toward treatment, categorical variable resulting from four questions, in two levels (positive attitude and negative attitude); control of disease, categorical variable resulting from a question answered by the interviewing nurse, in two levels (controlled and uncontrolled).

Self-report questionnaires were used, except for when patients required the assistance of the data collectors (project researchers) to fill them out, due to illiteracy or sight or understanding difficulties. In an attempt to avoid skewed data, the questionnaires were filled out before the nursing consultation, and for those that were filled out with the help of researchers, the questions were read precisely as they were on paper.

The data obtained were presented in tables after their analysis and treatment using the IBM SPSS Statistics program, version 25. The chi-squared test was applied, and the data cross-check tables were analyzed to confirm associations between variables.

This study received approval by the Health Ethics Committee of the Regional Health Administration of Northern Portugal I.P. (Opinion 85/2018). The participants were informed about the purpose of the study and assured of the confidentiality of data. They also signed the informed consent form.

Results

The sample was composed of 58.5% women and 41.5% men, with a mean age of 65.6 years, a mode of 64 ranging between 37 and 93, a standard deviation of 11.414, and a variance of 130.289. The majority (55%) is not working, and 51.8% have only completed primary school. Regarding the time of disease evolution, the majority of the interviewed participants present an evolution time between 10 and 20 years (Table 1).

Table 1
Sample characterization

	Type	Number	Percentage
Gender	Male	127	41.5%
	Female	179	58.5%
	Total	307	100%
Age	18-44 years old	9	2.9%
	45-64 years old	135	44.1%
	≥ 65 years old	162	52.9%
	Total	306	100%
Education level	Illiterate	54	17.7%
	Primary school	158	51.8%
	9th grade	54	17.7%
	High school	27	8.9%
	Higher education	12	3.9%
	Total	305	100%
Time of disease evolution	< 10 years	138	45.7%
	≥ 10 ≤ 20 years	146	48.3%
	≥ 21 years	18	6%
	Total	302	100%

Regarding the attitude toward treatment, 70.9% manifest a positive attitude. On the other hand, 76.6% appear to control the condition, and only 9.9% have had complications as the disease progressed, such as stroke, subconjunctival bleeding, and acute myocardial infarction (Table 2).

Table 2
Control of disease, complications, and attitude toward treatment

	Type	Number	Percentage
Control of disease	Controlled	216	76.6%
	Uncontrolled	66	23.4%
	Total	282	100%
Complications	Yes	25	9.9%
	No	227	90.1%
	Total	252	100%
Attitude toward treatment	Positive	217	70.9%
	Negative	89	29.1%
	Total	307	100%

It was noted that the vast majority (48.2%) has *good* knowledge, 27.0% has *very good* knowledge, 17.9% has *sufficient* knowledge, and only 6.8% showed *insufficient* knowledge (Table 3).

Table 3
Level of knowledge

	Level	Number	Percentage
Knowledge about HBP	Insufficient	21	6.8%
	Sufficient	55	17.9%
	Good	148	48.2%
	Very good	84	27.0%
	Total	307	100%

Inferential statistics showed, when analyzing hypothesis 1, that there was no statistically significant relationship to gender. There was, however, a statistically significant relationship ($p = 0.001$) between knowledge about HBP and the age group. Older people seldom have *very good* knowledge, and individuals between 45 and 64 years old usually have *good* or *very good* knowledge. As regards the education level, there is a statistically significant relationship between knowledge ($p = 0.000$) and education level, and the level of knowledge increases as the education level increases. The time of disease evolution did not manifest any relationship to knowledge. For hypothesis 2, there was a statistically significant relationship between the level of knowledge and the attitude toward treatment, meaning people with a higher level of knowledge have a more positive attitude.
Concerning hypothesis 3, there was no statistically significant relationship between knowledge about HBP and control of disease (Table 4).

Table 4
Chi-squared test for verification of hypotheses

	Knowledge about HBP	
	Chi-squared	p = significance
Gender	3.785	*0.286*
Age	20.907	***0.002***
Education level	42.770	***0.000***
Time of disease evolution	1.379	*0.967*
Attitude toward treatment	13.070	***0.004***
Control of disease	6.769	*0.08*

Discussion

It was found, when assessing the level of knowledge of health service users, that the majority has good knowledge, which confirms previous studies (Pinto, 2012).
According to other authors (Ávila et al., 2010; Madeira, 2015; Polónia, Martins, Pinto, & Nazaré, 2013; Prior et al., 2001), there was a statistically significant relationship ($p = 0.001$) between the knowledge about HBP and the age group, that is, older people seldom have very good knowledge. However, according to the study by Polónia et al. (2013), that is not the case because people older than 65 years have more knowledge and control their disease better. This divergence of findings may be cause to reflect on the different variables impacting the level of knowledge of older people.
No statistically significant difference was found regarding gender, as in Ávila et al. (2010), contrary to Madeira (2015), Praça (2013), and Pinto (2012).

A statistically significant relationship was found between knowledge and education; that is, individuals with a higher education level usually have better knowledge, confirming the results of the studies by Madeira (2015), Pinto (2012), and Praça (2013).

It was also noted that the time of disease evolution does not show any relationship to knowledge, contrary to the findings of Madeira (2015).

A statistically significant relationship was found between knowledge and attitude toward treatment, corroborating the studies by Prior et al. (2001), Pinto and José (2012), and Ferreira et al. (2016), unlike Dias, Cunha, Ribeiro, Albuquerque, and Andrade (2016). There seems to be no statistically significant relationship between knowledge about HBP and control of disease.

This study encountered some limitations, including the lack of motivation or lack of time to participate in the study by some health service users. The interviewees were often assisted in nursing consultations, so it would be relevant to focus on less regular users in future studies.

This study showed that the majority of patients possess a *good* level of knowledge. However, nurses work hard to increase literacy levels of patients, especially older people. An improvement in the levels of knowledge may allow individuals to manifest critical sense in their health-related decisions and, thus, achieve the necessary HL to manage the health/disease process better.

Furthermore, it is believed that there are other knowledge assessment tools available, validated for the Portuguese population, which can be considered in future studies, including mappings of HL in HBP.

Conclusion

The results of this study show that patients possess a good level of knowledge about their condition and manifest a positive attitude toward treatment. However, there is still a long way ahead because the sample of this study comprises people with insufficient knowledge. Strategies can be implemented, like thematic interventions for populations to promote HL; health education sessions to improve patients' knowledge about an adequate and varied diet, to identify warning signs and symptoms of uncontrolled HBP, to know the complications of HBP and which risk behaviors to avoid, among others; providing the health service users with tools and devices to improve their health and be able to know where to find the right information about their condition; and disseminating information about available resources in the community. All these strategies can help to increase the individuals' level of knowledge about their disease, in which family health teams can intervene.

It should also be noted that a significant part of the population, as individuals with HBP, is unaware of having the disease. Community nurses play an essential role in community interventions directed at health education because HLis defined as knowledge, motivation, and capacity of people to adhere to, understand and evaluate health-related information and, thus, to make the best decisions for their health.

This study constitutes just a snippet of a vast and comprehensive reality, and so the development of more research on this topic with validated instruments and the implementation of intervention projects become fundamental to promote the empowerment of individuals to self-manage the disease.

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