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RESEARCH PAPER (ORIGINAL)

Therapeutic Adherence of Hypertensive Patients in Primary Health Care

Adesão ao Regime Terapêutico de Pessoas com Hipertensão Arterial em Cuidados de Saúde Primários

Adhesión al Régimen Terapéutico de Pacientes con Hipertensión Arterial en Atención Primaria de Salud

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Abstract

Background: Hypertension is a chronic disease and the leading risk factor for cardiovascular diseases, representing a major public health problem.
Objectives: To describe the therapeutic adherence of hypertensive patients being followed up in Primary Health Care.
Methodology: A descriptive, observational and cross-sectional study was conducted with a sample of 332 subjects. Data were collected using a questionnaire for sociodemographic and clinical characterization, the Measure Treatment Adherence Scale, the International Physical Activity Questionnaire – Short Version, and a questionnaire on dietary care.
Results: The results show a high medication adherence (mean 5.63±0.46), poor adherence to physical activity (mean 2939.05±5538.85) and good adherence to dietary care.
Conclusion: The nursing consultation is a useful tool to empower hypertensive patients, enabling a personalized health promotion to improve therapeutic adherence.

Keywords: medication adherence; nursing care; hypertension; health promotion

Resumo

Enquadramento: A hipertensão arterial é uma doença crónica e o fator de risco de doença cardiovascular com maior prevalência, impondo-se como um relevante problema de saúde pública.
Objetivos: Descrever a adesão ao regime terapêutico das pessoas com hipertensão arterial, com vigilância de saúde em cuidados de saúde primários.
Metodologia: Trata-se de um estudo descritivo, observacional e transversal, com uma amostra de 332 pessoas. Para a recolha de dados recorreu-se a um questionário de caracterização pessoal, escala de Graffar adaptada, teste de medida de adesão aos tratamentos, o international physical activity questionnaire – versão curta e questionário de cuidados dietéticos.
Resultados: Observou-se uma elevada adesão ao regime terapêutico na adesão medicamentosa (média de 5,63±0,46), fraca na adesão à atividade física (média de 2939,05±5538,85) e boa na adesão aos cuidados dietéticos.
Conclusão: A consulta de enfermagem é uma ferramenta útil para a capacitação da pessoa com hipertensão arterial, possibilitando uma promoção de saúde personalizada, visando melhorar a adesão ao regime terapêutico.

Palavras-chave: adesão à medicação; cuidados de enfermagem; hipertensão; promoção da saúde

Resumen

Marco contextual: La HTA es una enfermedad crónica y el factor de riesgo cardiovascular de mayor prevalencia, por lo que destaca como un problema relevante de salud pública.
Objetivos:Describir la adhesión al régimen terapéutico de pacientes con hipertensión arterial en atención primaria.
Metodología: Se trata de un estudio descriptivo, observacional y transversal, con una muestra de 332 pacientes. Para la recogida de datos se utilizó un cuestionario de caracterización personal, la escala de Graffar adaptada, una prueba para medir la adhesión a los tratamientos , el cuestionario IPAQ – versión corta y un cuestionario de cuidados dietéticos.
Resultados: Se observó una adhesión elevada al régimen terapéutico en la adhesión a los medicamentos (media de 5,63±0,46), débil adhesión a la actividad física (media de 2939,05±5538,85) y buena en la adhesión a los cuidados dietéticos.
Conclusión: La consulta de enfermería es una herramienta útil para capacitar al paciente con hipertensión arterial y posibilita una promoción de la salud personalizada, con el objetivo de mejorar la adhesión al régimen terapéutico.

Palabras clave: cumplimiento de la medicación, cuidados de enfermería, hipertensión, promoción de la salud

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Introduction

Hypertension is a chronic disease (Direcção-Geral da Saúde, 2013a) and a risk factor for cardiovascular diseases (World Health Organization, 2013). The diagnosis leads to a difficult transition in the patient's life, since it requires managing the daily symptoms and treatment together with the demands of daily life (Meleis, 2010).

In 2008, worldwide, around 40% of adults aged 25 and above had been diagnosed with hypertension (World Health Organization, 2013). In Portugal, the estimates indicate a prevalence of 42.6%, but, of these, only 11.2% of the patients are controlled (BP <140/90 mm Hg) and 39.0% take anti-hypertensive medication (Macedo et al., 2007).

Hypertension is the leading risk factor for cardiovascular diseases, representing a major public health issue given the associated mortality and morbidity rates (World Health Organization, 2013). We believe it is necessary to intervene at the three levels of prevention in order to minimize its effects.

The full effectiveness of the treatment can be achieved by improving therapeutic adherence, and here the health professionals, particularly primary health care (PHC) professionals, play a key role. The promotion of healthier lifestyles provides increased health gains and quality of life and also improves the therapeutic effectiveness.

Nowadays, health promotion and health education interventions with a view to improving therapeutic adherence in hypertension are a necessity. The nursing profession is the primary health resource for families and communities, playing an important role.

Thus, this study aims to describe the therapeutic adherence in hypertensive patients being followed-up in PHC.

Background

Hypertension can be defined "as the persistent elevation, in various measurements and on different occasions, of systolic pressure equal to or greater than 140 mmHg and/or diastolic pressure greater than or equal to 90 mmHg" (Direcção-Geral da Saúde, 2013a, p. 1). The same authors classify it as a chronic disease, advocating the need for a continuous intervention toward the management and control of the clinical situation, and prevention of complications.

Hypertension is a serious public health issue with a high prevalence, affecting approximately 42.6% of the Portuguese population, among which only 11.2% of the patients are controlled. The Northern region has the lowest prevalence, whereas the Alentejo region has the highest prevalence; it is more prevalent in males and tends to increase with age (Macedo et al., 2007).

PHC plays a central role in the management and control of hypertension, since it requires a continuous surveillance, the definition of a therapeutic plan and the patient's adherence.

The treatment for hypertension is based on drug therapy, adoption of a healthy diet and physical activity.

Therapeutic adherence is the key to success in the prevention and management of cardiovascular diseases. Adherence is considered to be present when the patient's behavior (in terms of taking medication, following diets, or executing life style changes) coincides with a healthcare provider's recommendations (World Health Organization, 2003).

We believe that health professionals need to dialogue with the patients in order to encourage adherence to the therapeutic regimen, which may be successfully achieved if they use a clear language, and take into account the patients' information and clarification needs, cognitive skills, cultural beliefs, and socio-economic status.

The pharmacological and non-pharmacological treatment of hypertension aims to avoid long-term sequelae and, ultimately, reduce mortality and morbidity. To this end, blood pressure (BP) must be lowered to values below 140/90 mmHg and, simultaneously, other modifiable cardiovascular risk factors need to be managed (Direção-Geral da Saúde, 2013b).

The major barrier to the control of hypertension is the non-adherence to the therapeutic regimen (World Health Organization / International Society of Hypertension Writing Group, 2003).

The initial treatment for hypertension should focus on modifying risk factors. Nurses are responsible for investing in health education, promoting the adoption of a varied and nutritionally balanced diet, rich in vegetables, legumes, and fruit, and poor in total fat

and saturated fat, and emphasizing the benefits of regular physical activity of about 30 to 60 minutes, four to seven days a week. Such measures influence the control and maintenance of normal weight, that is, a body mass index (BMI) greater than or equal to 18.5 Kg/m^2 but lower than 25 Kg/m^2 and a waist circumference below 94 cm in men and below 80 cm in women. Other changes relate to the restriction of excessive alcohol consumption (maximum of 2 drinks/day), the reduction of salt intake (to less than 5.8 g/day), and smoking cessation (Direção-Geral da Saúde, 2013b).

In relation to alcohol consumption, Babor, Higgins-Biddle, Saunders, and Monteiro (2001) consider that the level of daily consumption should be less than 20 g (2 drinks/day) and that individuals should preferably refrain from drinking any alcoholic beverage during at least two days per week.

As regards the determinants of hypertension, Dickinson et al. (2014) proved that the lifestyle changes capable of reducing blood pressure are salt restriction, reduced alcohol consumption, a high consumption of fruits and vegetables, low fat products, weight reduction, and regular physical activity.

In a study of the population residing in Porto, Portugal, Machado et al. (2010) found a higher prevalence of hypertension in both male and female individuals who did not practice regular physical activity. Martins, Guedes, Teixeira, Lopes, and Araújo (2009) found that 40% of the respondents showed a low level of physical activity and 44.2% practiced it to a moderate level.

As for the medication used to control hypertension, diuretics (47.4%), followed by angiotensin receptor blockers (ARBs; 43.0%) and angiotensin-converting enzyme inhibitor (ACE inhibitor; 39.2%) were the most commonly prescribed pharmacological classes (Cortez-Dias, Martins, Belo, & Fiuza, 2009).

Nurses, as the health professionals who are closer to the population, play a key role in health education aimed at the promotion of healthy lifestyles and, consequently, health promotion and disease prevention.

The diagnosis of hypertension leads to a difficult transition in the patient's life. Nurses play an important role in managing the patient's adaptation and developing re-adaptation strategies, which can facilitate the process of acquiring new skills.

Research Question

What is the level of therapeutic adherence of hypertensive patients being followed-up in PHC?

Methodology

This study was developed in a family health unit (FHU) in the municipality of Barcelos, with a resident population of around 120 084 inhabitants and an aging index of 90.7% (Instituto Nacional de Estatística, 2013). In line with our research objectives, we carried out a descriptive, observational and cross-sectional study.

Population and Sample

The FHU where the study was developed had a total of 11,561 enrolled subjects, of which 49.35% were male and 50.65% were female, with an aging index of 103.17%.

The target population of the study was composed of 2,227 subjects with a clinical diagnosis of hypertension enrolled in the unit: 1,314 women and 913 men. However, since this study could not cover the whole population, we used a systematic random probability sampling technique. From a list of hypertensive patients, one at every six patients was selected to integrate the study sample. The third patient on the list, randomly selected between one and six, was the first to integrate the sample.

The inclusion criteria in this sample were being over 18 years of age and not presenting a diagnosis of cognitive impairment at the date of questionnaire completion. The final sample was composed of 332 patients.

Instruments

According to the research objectives and the characteristics of the studied population and environment, we selected scales and questionnaires validated for the Portuguese population, and used questionnaires specifically designed for this purpose which were validated in a pre-test.

The following instruments were used: 1) a questionnaire for sociodemographic and clinical profile characterization; 2) the adapted Graffar Scale (Costa, Leitão, Santos, Pinto, & Fino, 1996), which showed a reasonable reliability (Pestana & Gageiro,

1998), with a Cronbach's alpha value of 0.67; 3) a questionnaire on dietary care (including questions about the number of meals, frequency of intake according to the type of food, cooking method and most commonly used fat, frequency and amount of alcohol consumption); 4) the Measure Treatment Adherence Scale (Delgado & Lima, 2001) with seven questions, in which the level of therapeutic adherence is obtained by dividing the sum of the individual item scores by the total number of items (a higher score means a higher level of adherence), with an average internal consistency (Pestana & Gageiro, 1998) and a Chronbach's alpha value of 0.78; 5) the short form of the International Physical Activity Questionnaire (IPAQ; Craig et al., 2003), with seven questions regarding the practice of physical activity in the last seven days, presenting a reasonable internal consistency (Pestana & Gageiro, 1998) with a Cronbach's alpha value of 0.61.

Procedure

Data were collected between February 6 and March 31, 2014.

The patients with an appointment were informed about the study, its purpose, the objectives and the guarantee of data confidentiality.

After obtaining their agreement to be included in the study, the researcher contacted the participants to schedule the questionnaire delivery. The questionnaire was filled in by the FHU users and the researcher clarified any questions when necessary.

Subsequently, the participants delivered the completed questionnaire at the FHU, together with the informed consent.

Statistical Analysis

The obtained data were coded so as to allow for the statistical analysis using SPSS - *Statistical Package for the Social Sciences*. We performed a descriptive statistical analysis, taking into account the variables of each measurement instrument. To this end, we used distributions of frequencies, measures of central tendency and measures of dispersion.

Ethical Considerations

We obtained permission to conduct the study from the Ethics Committee for Health of the Regional Health Administration (ARS) of the North I.P. (Opinion No. 13/2014). In the first contact with the participants, they were informed about the purpose of the study and ensured of data confidentiality, being asked to sign the informed consent.

Results

The sample of 332 subjects was mostly composed of female patients (59.3%). The ages ranged between 27 and 94 years, with a mean of 64.33±12.38 years and a median of 65.5 years. The most represented age group was ≤64 years (47.3%) and the least represented was ≥80 years (12.3%). Most participants (75.9%) were married or cohabiting, and belonged to the lower middle class (69.9%) or to the middle class (26.2%). We found a predominance of childless families (35.2%), followed by nuclear families (30.1%), and extended families (16.2%).

The time elapsed since the hypertension diagnosis ranged from 1 to 34 years, with a mean of 9.11±7.30 years and a median of 6.00 years. The systolic blood pressure ranged from 74 to 193 mmHg, with a mean 141.33±15.14 mmHg and a median of 140.50 mmHg, whereas diastolic blood pressure ranged from 49 to 130 mmHg, with a mean of 77.73±11.05 mmHg and a median of 79.00 mmHg. We found a predominance of people with systolic blood pressure values above 140 mmHg and diastolic pressure above 90 mmHg (60.8%). In relation to waist circumference, 22.3% of men and 44.3% of women had a high waist circumference. The waist circumference of men ranged between 74 and 136 cm, with a mean of 92.85±12.73 cm and a median of 96.00 cm, whereas the waist circumference of women ranged between 63 and 136 cm, with a mean of 96.35±14.91 cm and a median of 88.50 cm. In relation to the body mass index, most people had excess weight (46.3% of men and 38.6% of women) or class I obesity (29.6% of men and 29.9% of women), being that 15.4% of men and 20.3% of women had normal weight.

The adherence to the therapeutic regimen consists of analyzing and assessing the behavior in relation to the adherence to medication, dietary care, and physical activity.

Most participants (97.3 %) took anti-hypertensive medication, being that 2.7% only used non-pharmacological methods. Diuretics (59.5%), ARBs (53.2%) and ACE inhibitors (35.3%) were the most commonly used pharmacological classes. The

number of prescribed drugs for the treatment of hypertension ranged between one and five, with a mean of 1.97±0.82 and a median of 2. Most participants (79.9%) took one or two drugs, 19.2% took three or four drugs, and 0.9% took five drugs. Medication adherence, which was assessed using the Measure Treatment Adherence Scale (Delgado & Lima, 2001), ranged between two and six, with a mean of 5.63±0.46 and a median of 5.71 (Table 1).

Table 1
Medication adherence and number of prescribed drugs (n=323)

	Statistics analysis		
	Min - Max	Mean ± Sd	Median
Number of drugs	1-5	1.97±0.82	2.00
Medication Adherence (MA)	2-6	5.63±0.46	5.71

The adherence to physical activity, which was assessed using the IPAQ, ranged between 0 and 37968 MET (Metabolic Equivalents), with a mean of 2939.05±5538.85 and a median of 720.00. Most participants (47.0%) showed a low level of physical activity, with an identical distribution of participants reporting a moderate and high level of physical activity (26.2% and 25.9%, respectively; Table 2). If we consider participants aged between 18 and 69 years, the adherence to physical activity ranged between 0 and 37968 MET, with a mean of 3627.15±5977.10 and a median of 1371.00: 37.1% of participants showed a low level of physical activity and 32.6% showed a high level of physical activity.

Table 2
Distribution of adherence to physical activity per IPAQ category of patients less than 69 years of age (n=221)

IPAQ Categories	ni	fi (%)
Low	82	37.1
Moderate	64	29.0
High	72	32.6
No answer	3	1.4

In relation to the dietary regime, most of the participants (97.9%) had three main meals, and 66.0% had in-between meals, of which 41.3% had two in-between meals. Most participants included salt (96.1%) in their diet, and 92.8% added no salt to their food at the table.
Boiling food was the most common cooking method (30.7%; Table 3).

Table 3
Characterization of the cooking methods (n=332)

Cooking methods	Everyday		Some days per week		Once a week		Once a month		Never		No answer	
	ni	fi	ni	fi	ni	fi	ni	fi	ni	fi	ni	fi
Grilled	25	7.5	236	71.1	46	13.9	15	4.5	7	2.1	3	0.9
Boiled	102	30.7	205	61.7	20	6.0	1	0.3			4	1.2
Stewed	9	2.7	150	45.2	111	33.4	39	11.7	17	5.1	6	1.8
Fried	4	1.2	52	15.7	92	27.7	82	24.7	91	27.4	11	3.3
Roasted	10	3.0	157	47.3	115	34.6	34	10.2	12	3.6	4	1.2

Olive oil was the most used fat (56.3%), followed by vegetable oil (7.5%). With regard to alcohol consumption in the previous 7 days, 53.6% of participants reported not having drunk alcoholic

beverages, while 46.4% referred having drunk alcoholic beverages. Wine was the main alcoholic beverage, varying between 2 and 360 cl, with a mean consumption of 54.31±57.665 cl, followed by beer, which ranged between 3 and 70 cl, with a mean consumption of 16.35±20.418 cl. In relation to the number of days of alcohol consumption, most of those who drank alcoholic beverages mentioned that they did so in more than 5 days per week (77.3%) and 19.5% drank in one to 5 days per week.

Discussion

The sample was composed mainly of women, which differs from other studies (Macedo et al., 2007; Cortez--Dias et al., 2009) that found a higher prevalence of men. This may be due to the greater predominance of women enrolled in the FHU who werediagnosed with hypertension, in a total of 59%. The participants' age ranged between 27 and 95 years, with a mean of 64.33±12.38 years and a median of 65.5 years, which are higher values than those found by Cortez-Dias et al. (2009) and Macedo et al. (2007). This difference may arise from the significant regional variation in the prevalence of hypertension (Macedo et al., 2007), the adopted lifestyles and habits, and the aging index within this population (103.17%).

There was a high proportion of married or cohabiting individuals (75.9%), higher than the proportion found by Macedo et al. (2007), which could be related to the rurality of a few parishes of this municipality, the traditional notion of marriage, and the respective religious practice. The number of patients living in one-person households was low (5.1%). The high number of patients living in childless families (35.2%), *nuclear families* (30.1%) and *extended families* (16.2%) are in line with the results reported by Macedo et al. (2007). These data can be associated with the rurality of a few parishes and their demographic characteristics.

Most respondents belonged to the lower-middle class (69.9%), which is characterized by having few economic resources, low schooling and low social status.

The health professionals will be able to intervene at this level, and the FHU is the perfect space to intervene in health determinants due to the close contact with the populations, the customized response and the ease of access.

The fact that most participants had high blood pressure values (60.8%) puts into question the effectiveness of the therapies used and the adherence to the therapeutic regimen. These results are similar to those found by Cortez-Dias et al. (2009).

Normal blood pressure values were observed in 39.2% of the respondents, which is higher than those reported by Macedo et al. (2007) and may result from the high medication adherence observed.

The mean waist circumference observed (94.27±14.15 cm) is higher than that observed by Macedo et al. (2007), with a high waist circumference in 22.3% of men and 44.3% of women, which is a risk factor for cardiovascular complications and demonstrate an ineffective adherence to the therapeutic regimen, given that it includes dietary care and regular physical activity. Most participants had excess weight (46.3% of men and 38.6% of women) or class I obesity (29.6% of men and 29.9% of women), which constitutes a severe risk factor for cardiovascular complications, being that hypertensive patients are already at risk.

There were nearly twice as many women with high waist circumference as men, which can be related to lifestyles, but also to genetic factors. Thus, it is essential to customize health education with a view to empowering hypertensive women to effectively manage their chronic disease, which will reduce the complications and improve treatment effectiveness.

The waist circumference and BMI values can be explained by the low adherence to a regular physical activity and dietary care, which justifies the need to redirect the health professionals' practices in their health education interventions for hypertensive patients.

During data collection, most people were taking anti-hypertensive medication (97.3%), which is an extremely high number when compared to Macedo et al. (2007). This difference may be explained by the fact that they were followed-up in a FHU, with a working methodology and objectives to be achieved. Diuretics (59.5%), followed by ARBs (53.2%) and ACE inhibitors (35.3%) were the most commonly prescribed pharmacological classes, which is in line with Cortez-Dias et al. (2009). The mean number of prescribed anti-hypertensive drugs seems low (1.97±0.82), which is explained by the fact that the ARS of the North has established an indicator for the FHUs (proportion of users ≥75 years of age with a chronic prescription of less than five drugs).

However, a small percentage of respondents took five drugs (0.9%), which may point to a non-compliance with this indicator. The number of prescribed drugs can be explained by the low adherence to physical activity and dietary care, which leads to the need of prescribing a greater number of drugs.

An improved adherence to physical activity and dietary care can lead to a reduction of both the number of drugs prescribed and the health costs. Therefore, as professionals who are close to the population, nurses can and must intervene to increase adherence to non-pharmacological treatment, aiming at a more effective control of blood pressure and, at the same time, enhancing the effects of the prescribed medication and reducing the need for additional drugs.

Medication adherence was high (5.63±0.46), which corroborates the study of Pinto and José (2012). In fact, the chosen treatment seems to be effectively followed in this population. However, this method of assessment only applies to the respondents' answers and we cannot confirm the actual medication intake through direct methods. This high adherence can be explained by the fact that there were very few one-person households in this population, thus existing a support network available to hypertensive patients.

We found that 47.0% of the respondents reported a low level of physical activity. This value is slightly higher than the one found by Martins et al. (2009) using the same instrument, in which 40% of the respondents showed a low level of physical activity. Advanced age seems to be a predictor of low physical activity, which can be explained by the progressive decline of physical abilities and increased morbidity.

We observed that almost all participants had three main meals per day and that 66.0% had in-between meals. Based on these data, we concluded that a significant percentage only has three meals per day, which is nutritionally inappropriate. A proper diet should include small snacks between main meals so that people can eat small portions at different times of the day. Such behavior may be explained by the predominance of the secondary sector, in which workers do not take breaks for snacks in order to maintain their productivity, but also by habits acquired within the family.

We noted that 96.1% of the respondents included salt in their diet. We cannot conclude that salt consumption among this population is the one recommended by the Directorate-General for Health (Direcção-Geral da Saúde, 2013b), because the questionnaire does not allow us to quantify how many grams are ingested per day. However, despite considering it beneficial for health the fact that participants did not add salt to their food at the table, we are unaware it they used too much salt while preparing the food. In their daily lives, boiling food was the most commonly used cooking method (30.7%), which shows that the participants chose the healthiest method. Olive oil was the most used fat in food preparation (56.3%), which is the monounsaturated fat recommended by the Directorate-General for Health (Direcção-Geral da Saúde, 2013b).

Alcohol consumption was high, with 46.4% of the respondents having reported drinking, perhaps because it is more accepted by society. We observed that men drink more alcohol (63.7%) than women (34.5%), which can be explained by the rurality and the long-lasting traditional notions on the role of women.

Most participants reported drinking more than five days per week (77.3%), which can be explained by the tradition of social drinking in this region. This level of alcohol consumption is not in line with the guidelines issued by the Directorate-General for Health and the World Health Organization (two units/day of consumption and 2 non-drinking days per week), and reveals the need to intervene as early as possible, so that people can stop or reduce their consumption with adequate intervention.

Wine (54.31±57.67 cl) and beer (16.35±20.418 cl) were the most consumed alcoholic beverages, which can be explained by the ease of access to such drinks and the tradition of consumption in the region. In addition, another factor is related to the cultivation of wine grapes for personal use, which is a common practice in this geographical area. The consumption of other alcoholic beverages was low.

A limitation of this study was the potential bias resulting from the use of the IPAQ to assess physical activity, as it was only validated for people aged between 18 and 69 years. Another limitation was the questionnaire on dietary care, which allowed us to assess the frequency of intake but not the amount of ingested salt or food.

Conclusion

It is essential to invest in health education for hypertensive patients with a view to minimizing the risk for cardiovascular diseases and the complications of hypertension, which emerges in the literature as a risk factor for the onset of cardiovascular diseases and, simultaneously, as a chronic disease. To this end, it is necessary to improve adherence to the therapeutic regimen in all its dimensions.

Within this context, this study aimed to describe the therapeutic adherence of hypertensive patients. We found a high medication adherence and a low adherence to physical activity, which can indicate the difficulty in adopting healthier lifestyles. The study showed a good adherence to the dietary care.

Although most participants were medicated and despite the high medication adherence, we found high blood pressure values, putting into question the effectiveness of pharmacological measures and highlighting the importance and impact of non-pharmacological measures on the treatment of hypertension.

We also emphasize that a high number of participants, mostly women, show high waist circumference and BMI values, representing a third of the participants.

Therefore, improving therapeutic adherence, mainly concerning adherence to physical activity and dietary care, will increase the effectiveness of the treatment for hypertension. To this end, nurses, given their closer contact with the population, should intervene to improve adherence to non-pharmacological treatment, thus controlling blood pressure values more effectively and maximizing the effects of the prescribed medication.

The adoption of healthy lifestyles, aiming at an effective health promotion, is a goal based on international guidelines and the Portuguese national health plan, as well as on health programs and institutional projects.

Therefore, Primary Health Care is in a privileged position to develop projects and programs aimed at improving the therapeutic adherence of hypertensive patients.

We conclude that it is necessary to develop a customized health education and to engage and empower citizens to manage hypertension. Enabling individuals to acquire these skills also allows them to better familiarize themselves with the determinants of their own health. This is a starting point for changing behaviors and creating new life habits.

Further studies should be conducted about the factors that influence the therapeutic adherence in hypertensive patients and the measures capable of improving it. The study of the influence of nursing consultations in the process of therapeutic adherence should not be overlooked.

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