Lifestyle and adherence to therapy in a group of people with arterial hypertension

Estilo de vida y adherencia a la terapia en un grupo de personas con hipertensión arterial

Estilo de vida e adesão à terapêutica num grupo de pessoas portadoras de hipertensão arterial

Andrea Silva Santos Pinto[1]
ORCID: 0000-0001-5529-0285
Ermelinda Maria Gonçalves Bernardo Marques[2]
ORCID: 0000-0003-3024-8392
Dora Maria Ricardo Fonseca Saraiva[3]
ORCID: 0000-0002-2518-3371

[1]Unidade de Cuidados de Saúde Personalizados. Teixoso, Portugal.
[2]Escola Superior de Saúde do Instituto Politécnico da Guarda. Guarda, Portugal.
[3]Centro Hospitalar Universitário Cova da Beira. Covilhã, Portugal.

Corresponding author:
Andrea Silva Santos Pinto
E-mail: andreass.enf@gmail.com

Abstract

The aim was to evaluate the lifestyle and adherence to therapy in a group of people with HTA, in a Personalized Health Care Unit. It is a quantitative, descriptive, and cross-sectional study. The sample is from 314 customers. An assessment protocol was used, with the following scales: Treatment Compliance Measure, Eating Habits Scale, Alcohol Use Disorders Identification Test, the Fagerström Nicotine Dependence Test and the International Physical Activity Questionnaire, short version. Results show that 88.2% of respondents adhere to the prescribed therapy. In terms of lifestyle, it appears that 96.2% of customers have adequate eating habits; 94.3% are unlikely to consume alcoholic beverages, 5.1% are smokers and 49.4% are "insufficiently active". The results suggest the need to intervene in health promotion through a community program aimed at adherence to therapy and empowering the person to adopt a healthy lifestyle.

Descriptors: Lifestyle; Medication Adherence; Patient Compliance; Treatment Adherence and Compliance; Hypertension.

Resumén

El objetivo fue evaluar el estilo de vida y la adherencia a la terapia en un grupo de personas con HTA, en una Unidad de Atención Personalizada. Es un estudio cuantitativo, descriptivo y transversal. La muestra es de 314 clientes. Se utilizó un protocolo de evaluación, con las siguientes escalas: Medida de Adherencia al Tratamiento, Escala de Hábitos Alimenticios, Test de Identificación de Trastornos por Uso de Alcohol, Test de Dependencia de Nicotina Fagerström y Cuestionario Internacional de Actividad Física, versión corta. Los resultados muestran que el 88,2% de los encuestados se adhieren a la terapia prescrita. En términos de estilo de vida, parece que el 96,2% de los clientes tienen hábitos alimentarios adecuados; El 94,3% tiene poca probabilidad de consumir bebidas alcohólicas, el 5,1% son fumadores y el 49,4% son "insuficientemente activos". Los resultados sugieren la necesidad de intervenir en la promoción de la salud a través de un programa comunitario dirigido a la adherencia a la terapia y empoderar a la persona para que adopte un estilo de vida saludable.

Descriptores: Estilo de Vida; Adherencia a la Medicación; Cumplimiento del Paciente; Adherencia y Cumplimiento de Tratamiento; Hipertensión.

Resumo

Objetivou-se avaliar o estilo de vida e a adesão à terapêutica num grupo de pessoas portadoras de HTA, numa Unidade de Cuidados de Saúde Personalizados. É um estudo quantitativo, descritivo e transversal. A amostra é de 314 clientes. Utilizou-se um protocolo de avaliação, com as escalas: Medida de Adesão aos Tratamentos, Escala de Hábitos Alimentares, *Alcohol Use Disorders Identification Test*, o Teste de Fagerström de Dependência à Nicotina e o Questionário Internacional de Atividade Física versão curta. Resultados revelam que 88,2% dos inquiridos aderem à terapêutica prescrita. No estilo de vida, constata-se que 96,2% dos clientes têm hábitos alimentares adequados; 94,3% têm baixa probabilidade de consumir bebidas alcoólicas, 5,1% são fumadores e 49,4% são "insuficientemente ativos". Os resultados sugerem a necessidade de intervir na promoção da saúde através de um programa comunitário que vise a adesão à terapêutica e capacite a pessoa na adoção de um estilo de vida saudável.

Descritores: Estilo de Vida; Adesão à Medicação; Adesão do Paciente; Adesão e Adesão ao Tratamento; Hipertensão.

Introduction

Arterial Hypertension (HTA) has a high prevalence worldwide, constituting a serious problem for public health[1].

Portugal is one of the countries in Europe with one of the highest rates of HTA. In fact, in Cova da Beira the situation is similar, uncomplicated hypertension is the second most prevalent morbidity[2]. Its high prevalence leads to huge economic costs, at individual and social level, which is why its study is urgent.

To minimize its effects, it is necessary to intervene in the control of modifiable risk factors, through the adoption of a healthy lifestyle and the optimization of the therapeutic regimen[3,4].

In Portugal, rates of adherence to therapy fluctuate between 16.9% and 91.3%[5,6].

Adherence to therapy can be defined as the correct execution of the pharmacological prescription, since there are several factors that influence its adherence. The main factors can be grouped into i) social, economic, and cultural factors; ii) factors related to health professionals and services; iii) factors related to the underlying disease and comorbidities; iv) factors related to the prescribed therapy and v) individual factors related to the client[7-12].

Non-adherence to therapy has consequences in terms of quality of life, being one of the main causes of inadequate blood pressure control, thus increasing the risk of associated complications[7,10,11,13].

This reinforces the predominant role of nurses in the development of strategies that promote adherence to therapy and a healthy lifestyle.

The definition of lifestyle arises within the scope of various health-promoting strategies, which involve certain behaviors based on different choices made by individuals and are conditioned by life opportunities[14]. In this context, government agencies have developed several programs that aim to promote a healthy lifestyle worldwide.

In this sense, it is considered pertinent to study this theme, on the one hand, AHT is considered one of the most serious diseases of today, constituting one of the main risk factors for cardiovascular diseases; on the other hand, adherence to therapy is very important in the control of hypertension, a healthy lifestyle is one of the measures to adopt in the non-pharmacological treatment of this.

The solidity and consistency of this research will certainly result in the achievement of new intervention strategies in Nursing.

The general objective of this study is to assess adherence to therapy and lifestyle, in a group of people with HTA, in a Personalized Health Care Unit (UCSP), in the Central Region of Portugal. A research question was created: What is the adherence to therapy and lifestyle in a group of people with hypertension?

Methodology

It is a non-experimental investigation, with a quantitative approach. It is a descriptive, analytical, correlational, and cross-sectional study.

The target population of the study is constituted by 1688 clients registered in the "PNDCC Risk: Hypertension" and followed in the HTA consultation, of a UCSP in the Central Region of Portugal. The sampling technique was non-probabilistic, accidental. In calculating the sample size, the Raosoft computer program was used to guarantee the representativeness of the population, with 314 customers being studied.

A straight-line assessment protocol was used, applied during an interview. This protocol includes questions related to the sociodemographic profile; socio-professional; anthropometric data and clinical data[15].

Adherence to therapy was assessed using the Measure of Adherence to Treatment (MAT), validated by Delgado and Lima[16] for the Portuguese population and allows us to assess the extent to which the client follows the guidelines provided by health professionals, as well as their behavior regarding therapeutic adherence.

Lifestyle data were obtained through four scales, on: eating habits, alcohol consumption, smoking habits, and physical activity.

Eating habits were assessed using the Eating Habits Scale (EHA). The EHA is composed of statements, its forty items are grouped into four dimensions: "food quantity", "food quality", "food variety" and "food adequacy"[17].

Alcohol consumption was assessed using the Alcohol Use Disorders Identification Test (AUDIT), developed by the WHO. The AUDIT consists of ten items, grouped into three dimensions[18] relating to: "characterization of consumption", "symptoms of dependence" and "consequences of consumption". Regarding smoking habits, the Fagerström Test of Nicotine Dependence was used as a measure to assess tobacco dependence. The Portuguese version was validated by study[21] and consists of six items related to nicotine addiction.

To assess physical activity, the short version of the International Physical Activity Questionnaire (IPAQ) was used, the Portuguese version of which was validated by Campaniço. The IPAQ was proposed by the WHO as a global instrument to determine the level of physical activity in the population, being the most widely used instrument worldwide to assess physical activity. In the short version, the IPAQ has nine items, with open questions that allow the assessment of behavior related to physical activity and sedentary lifestyle in the last 7.0 days[19].

Data collection was carried out between May 27 and July 15, 2019, after applying a pre-test. Data analysis was performed using the Statistical Package for Social Sciences (SPSS), version 25.0.

The investigation complied with all ethical/legal procedures. Clients who participated in this study were previously informed that the data obtained would be kept confidential and private, and the free and informed consent was signed, according to Resolution No. 466/12 of the National Health Council. Authorization from the Clinical Council was obtained. and the opinion of the Ethics Council, referring to the Unit where the study was carried out.

Results and Discussion

In sociodemographic terms, most clients are female (63.7%). The average age is 68.8 years, the youngest being

25 years old and the oldest 89 years old. Most are married (72.0%) and live-in urban areas (68.5%).

Regarding educational qualifications, 53.2% have completed the 4th year of schooling, 75.8% are retired, 51.3% have an income in the level of less than €419 and 42.7% consider their income to be sufficient for the medication expenses.

Regarding the anthropometric characterization of the sample, it appears that 41.4% of customers are pre-obese, with men (46.5%) being the ones who contributed the most to this percentage.

As for the metabolic risk, an evaluation of the abdominal perimeter was carried out, which demonstrates that both sexes have a much-increased risk of metabolic complications.

In the clinical characterization, it appears that 30.6% of respondents have grade I or mild hypertension and 22.9% do a weekly monitoring of blood pressure. Customers mention the presence of other diseases, mostly (67.5%)

endocrine, nutritional, metabolic, and immunological. The majority (46.5%) had 1 HTA nursing consultation in the last year. On average, customers take 1.2 different pills for HTA and 93.9% take another type of medication, the majority (96.2%) medication for the cardiovascular system. About self-administration of medication, 94.6% of respondents are self-employed and do not need help.

Regarding the classification of adherence to therapy, as shown in Table 1, 88.2% of respondents adhere to the therapy, however 11.8% do not adhere to the prescribed therapy. Regarding gender, it appears that men (91.2%) adhere more than women (86.5%).

These results can be explained by the fact that the sample is made up of individuals with low levels of education, and therefore, low levels of literacy. Therefore, in consultations, they can present high levels of anxiety and wrong beliefs about the therapy. Similar results are found in a study in Nigeria, in which adherence to antihypertensive therapy is found in 90.0%[8].

Table 1. Classification of clients' adherence to therapy by sex. Teixoso, Portugal, 2019

Adherence to therapy		Sex				Total	
		Feminine		Masculine			
		n	%	n	%	n	%
	Non-adherence	27	13,5	10	8,8	37	11,8
	Adherence	173	86,5	104	91,2	277	88,2
Total		200	100,0	114	100,0	314	100,0

Lifestyle was assessed using the EHA scales, the AUDIT, the Fagerström Nicotine Dependence Test and the IPAQ short version.

About the classification of the respondents' eating habits, as shown in Table 2, most customers (96.2%) have adequate eating habits, compared to 3.8% with inadequate

habits. Regarding gender, it appears that almost all men (99.1%) have adequate eating habits and 94.5% of women do too. Although in this study, inadequate eating habits are little evident, in Portugal, they contribute to 50.0% of adults being overweight[20].

Table 2. Classification of eating habits of customers by sex. Teixoso, Portugal, 2019

Eating habits	Sex				Total	
	Feminine		Masculine			
	n	%	n	%	n	%
Inappropriate habits	11	5,5	1	0,9	12	3,8
Proper habits	189	94,5	113	99,1	302	96,2
Total	200	100,0	114	100,0	314	100,0

Regarding the classification of the respondents' alcohol consumption, as shown in Table 3, most customers (94.3%) have a low probability of consuming alcoholic beverages. However, 5.1% are at risk and 0.6% have harmful alcohol consumption.

Table 3. Classification of clients' alcohol consumption by sex. Teixoso, Portugal, 2019

Alcohol consumption	Sex				Total	
	Feminine		Masculine			
	n	%	n	%	n	%
Dependency	0	0,0	0	0,0	0	0,0
Harmful consumption	0	0,0	2	1,8	2	0,6
Have risk	0	0,0	16	14,0	16	5,1
Low probability	200	100,0	96	84,2	296	94,3
Total	200	100,0	114	100,0	314	100,0

The prevalence of tobacco consumption in this study is 5.1%, 2.0% are women and 10.5% are men.

The classification of smoking habits can be seen in Table 5. Of the clients with smoking habits, the majority (62.4%) have "low dependence" on nicotine, however, in an

equal percentage, 18.8% of the clients, they have a "high addiction" and a "medium addiction" to nicotine. Analyzing by sex, it appears that "high dependency" occurs only in men (25.0%), with women having a null percentage (0.0%). However, it is mostly women (25.0%) who present an

"average dependency", compared to men (16.7%). Women also have a higher percentage of "low dependency" (75.0%) compared to men (58.3%).

In this context, it is important that the nurse encourages smoking cessation, and forward the client to the respective smoking cessation consultation, as well as to the website of the Training Program for Smoking Cessation, of the reference hospital.

Table 4. Classification of smoking habits of customers by sex. Teixoso, Portugal, 2019

Smoking habits	Sex				Total	
	Feminine		Feminine			
	n	%	n	%	n	%
High dependency	0	0,0	3	25,0	3	18,8
Medium dependency	1	25,0	2	16,7	3	18,8
Low dependency	3	75,0	7	58,3	10	62,4
Total	4	100,0	12	100,0	16	100,0

By classifying physical activity according to the IPAQ short version, it can be seen in Table 6 that 49.4% of customers are "insufficiently active" or sedentary, however 29.6% are "vigorously active" and 21.0% are "moderately active".

These data are in line with the literature, in which clients with HTA reveal low adherence to physical activity. Other investigations show that 47.0% of respondents have low physical activity[21].

Accordingly, a study[22] reveals that 21.0% of customers regularly exercise.

The low adherence to physical activity may be since most respondents are elderly and have osteoarticular problems making clients more physically limited. The lack of resources in the community that encourage physical activity may be a conditioning factor.

However, in rural areas, the elderly could be more active, as it is common to have some activity linked to agriculture. Thus, it is important that nurses encourage clients to practice physical exercise, appropriate to each specific situation, namely walking or climbing stairs (one flight of stairs is equivalent to 20 steps and corresponds to 10 minutes of walking).

Table 5. Classificação da atividade física dos clientes por sexo. Teixoso, Portugal, 2019

Atividade física	Sexo				Total	
	Feminino		Masculino			
	n	%	n	%	n	%
Insuficientemente ativo	111	55,5	44	38,5	155	49,4
Moderadamente ativo	42	21,0	24	21,1	66	21,0
Vigorosamente ativo	47	23,5	46	40,4	93	29,6
Total	200	100,0	114	100,0	314	100,0

Regarding limitations, there is the fact that this study is only restricted to clients of a UCSP. Another aspect to be highlighted, in methodological terms, is the use of the non-probabilistic sampling method. Although it is easy and quick, the results only refer to the sample used and cannot be reliably extrapolated to the rest of the population. Hence, it is necessary to confirm these results with more comprehensive and representative samples.

Conclusion

The literature review indicated that HTA, due to its high prevalence and incidence, constitutes a serious health problem for the world population. Treatment involves pharmacological and non-pharmacological measures, such as adopting a healthy lifestyle, including a balanced diet, reducing alcohol consumption, smoking cessation, and regular exercise.

For treatment success, it is essential that there is adherence to therapy, as there are several factors that can influence it.

The Nurse's intervention plays a preponderant role in health planning; thus, the health status of a community must be assessed through knowledge of its adherence to therapy and its lifestyle. Knowledge of these will help the Nurse in the development of strategies that promote adherence to therapy and a healthy lifestyle, for the population and the community in general.

Considering that 11.8% of clients do not adhere to therapy, it is essential that nurses continue to develop these educational strategies and actions in the community to increase literacy and empower the individual/family and community, for a greater adherence to therapy and a healthy lifestyle.

The results suggest the need to intervene in health promotion through a community program aimed at adherence to therapy and empowering the person to adopt a healthy lifestyle. In this context, nurses, as health professionals closer to the population, have a fundamental and determining role.

As a future line of investigation, it is suggested that a comparative study be carried out in the community, with two samples of clients: those who are followed and those who are not followed in HTA consultations, at the same UCSP to assess adherence to therapy and the lifestyle.

References

1. Vilaça AF, Vieira A, Fernandes A, Esteves I, Bouça J, Peixoto V. Disfunção sexual feminina e hipertensão arterial numa população dos cuidados de saúde primários. Revista Portuguesa de Hipertensão e Risco Cardiovascular. 2018;61:6-10.
2. Cairrão AJN, Pinto ASS, Gomes FJP, Marques MAC. Diagnóstico de Situação de Saúde da Cova da Beira. Trabalho apresentado no estágio I, do Mestrado em Enfermagem Comunitária na Escola Superior de Saúde do Instituto Politécnico da Guarda, Portugal; 2018.
3. Direção-Geral da Saúde (DGS). Norma n.º 017/2013 - Avaliação antropométrica no adulto [Internet]. Lisboa: Ministério da Saúde; 2013 [acesso em 14 mai 2018]. Disponível em: http://nocs.pt/wp-content/uploads/2016/06/i019598.pdf
4. World Health Organization (WHO). Hearts, technical package for cardiovascular disease management in primary health care [Internet]. Genebra: WHO; 2016 [acesso em 14 mai 2018]. Disponível em: https://www.who.int/cardiovascular_diseases/hearts/Hearts_package.pdf
5. Martins AJC, Martins JP, Santos SAS. Adherence to the medication regimen before and after a therapeutic awareness-raising intervention. Revista de Enfermagem Referência. 2017;4(14):9-16. DOI:10.12707/RIV17021
6. Ferrão ÂFM. Avaliação dos níveis de adesão ao tratamento e de literacia em saúde numa amostra de doentes com hipertensão arterial. Dissertação de Mestrado apresentada na Universidade da Beira Interior, Covilhã; 2018.
7. Sousa RC, Lucena ALF, Nascimento WS, et al. Particularities of hypertensive elderly people to medicinal treatment adherence. Journal of Nursing UFPE. 2018;12(1):216-223. DOI: 10.5205/1981-8963-v12i01a23296p216-223-2018
8. Ehwarieme TA, Chukwuyem EN, Osayande CO. Knowledge of and compliance with therapeutic regimens among hypertensive patients in Nigeria. Africa Journal of Nursing and Midwifery. 2018;20(1):1-23. DOI:10.25159/2520-5293/3737
9. Ashoorkhani M, Majdzadeh, R, Gholami J, Eftekhar H, Bozorgi A. Understanding non-adherence to treatment in hypertension: a qualitative study. International Journal of Community Based Nursing and Midwifery [Internet]. 2018 [acesso em 14 mai 2020];6(4):314-323. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6226612/pdf/IJCBNM-6-314.pdf
10. Silva TJA, Almeida EUA, Cabral SAAO, Figueiredo CHA. Dificuldades enfrentadas pelo portador de hipertensão arterial sistémica à adesão ao tratamento na Estratégia Saúde da Família. Revista Brasileira de Educação e Saúde. 2017;7(1):23-30. DOI: 10.18378/REBES.V7I1.4839
11. Blanski CRK, Lenardt MH. Compreensão da terapêutica medicamentosa pelo idoso. Revista Gaúcha Enfermagem. 2018;26(2):180-188.
12. World Health Organization (WHO). Adherence to long term therapies. Evidence for action [Internet] Genebra: WHO; 2003 ácesso em 16 jan 2019]. Disponível em: http://apps.who.int/iris/bitstream/10665/42682/1/9241545992.pdf
13. Martins L, Narkiewicz K. Eficácia das associações fixas com perindopril no tratamento da hipertensão arterial, 11º congresso de hipertensão e risco cardiovascular global. Revista Portuguesa de Hipertensão e Risco Cardiovascular. 2017;34:28-30.
14. Cockerham W. Health lifestyle theory and the convergence of agency and structure. Journal of Health Social Behavior. 2005;46(1):51-67. DOI: 10.1177/002214650504600105
15. Direção-Geral da Saúde (DGS). Norma n.º 020/2011 - Hipertensão arterial: definição e classificação [Internet]. Lisboa: Ministério da Saúde; 2013 [acesso em 14 mai 2018]. Disponível em: https://normas.dgs.min-saude.pt/wp-content/uploads/2019/09/hipertensao-arterial_definicao-e-classificacao.pdf
16. Delgado AB, Lima ML. Contributo para a validação concorrente de uma medida de adesão aos tratamentos. Psicologia: Saúde e Doenças. 2001;1:81-100.
17. Marques A, Lúzio F, Martins J, Vaquinhas M. Hábitos alimentares: validação de uma escala para a população portuguesa. Escola Anna Nery Revista de Enfermagem. 2011;15(2):402-409. DOI:10.1590/S1414-81452011000200025
18. Direção-Geral da Saúde (DGS). Norma n.º 30/2012 – Deteção precoce e intervenção breve no consumo excessivo de álcool [Internet]. Lisboa: Ministério da Saúde; 2012 [acesso em 14 mai 2018]. Disponível em: https://www.dgs.pt/directrizes-da-dgs/normas-e-circulares-normativas/norma-n-0302012-de-28122012-png.aspx
19. Campaniço HMPG. Validade simultânea do questionário internacional de atividade física através da medição objetiva da atividade física por actigrafia proporcional. Dissertação de Mestrado apresentada na Universidade de Lisboa, Faculdade de Motricidade Humana, Lisboa, Portugal; 2016.
20. Direção-Geral da Saúde (DGS). Programa Nacional para a Promoção da Alimentação Saudável - PNPAS. Lisboa: Ministério da Saúde: 2017 [acesso em 14 mai 2018]. Disponível em: https://www.sns.gov.pt/wp-content/uploads/2017/07/DGS_PNPAS2017_V7.pdf
21. Ferreira P, Quintal C, Lopes I, Taveira N. Teste de dependência à nicotina: validação linguística e psicométrica do teste de Fagerström. Dependência Tabágica [Internet]. 2009 [acesso em 14 mai 2019];27(2):37-56. http://hdl.handle.net/10316/13654
22. Afonso AFB. Promover o autocuidado da pessoa com hipertensão arterial. Dissertação de Mestrado apresentada na Escola Superior de Enfermagem de Lisboa, Portugal; 2018.