REUFSM
REVISTA DE ENFERMAGEM DA UFSM

UFSM
Rev. Enferm. UFSM - REUFSM
Santa Maria, RS, v. 11, e6, p. 1-22, 2021
DOI: 10.5902/2179769242403
ISSN 2179-7692

Original Article Submission: 06/02/2020 Acceptance: 24/07/2020 Publication: 26/01/2021

Perception of people with arterial hypertension about aspects that influence treatment adherence

Percepção de pessoas com hipertensão arterial sobre aspectos que influenciam a adesão ao tratamento

Percepción de las personas con hipertensión arterial sobre aspectos que influyen en la adherencia al tratamento

Paulo Roberto de Oliveira Miranda[I], Débora de Oliveira Sacramento[II], Flávia Batista Barbosa de Sá Diaz[III], Luana Vieira Toledo[IV], Renan Sallazar Ferreira Pereira[V], Katiusse Rezende Alves[VI]

Abstract: Objective: to describe the perception of people with arterial hypertension of the aspects that facilitate and hinder treatment adherence. **Method:** descriptive qualitative study developed with 16 people met in Nursing consultations. Interviews were conducted with a semi-structured guide and the content analysis technique was used. Data were collected between January and August 2017. **Results:** having willpower, family and multidisciplinary support, knowledge about the pathology and forms of prevention and fear of death facilitated adherence; on the other hand, little knowledge, laziness, lack of urban infrastructure and climatic conditions, habit of consuming unhealthy foods, alcoholic beverages and tobacco, cost of treatment and forgetfulness of taking the medication hindered adherence. **Conclusion:** the treatment of hypertension causes changes in the dynamics of life, being essential to have willpower, family and professional support, in addition to overcoming unhealthy habits.
Descriptors: Nursing; Hypertension; Patient Compliance; Treatment Adherence and Compliance; Medication Adherence

Resumo: Objetivo: descrever a percepção de pessoas com hipertensão arterial sobre aspectos que facilitam e dificultam a adesão ao tratamento. **Método:** estudo qualitativo descritivo desenvolvido com 16 pessoas atendidas

I Nurse. Specialist in Public Health Management at Faculdade Batista de Minas Gerais. E-mail: oliveira.pauloroberto@yahoo.com.br ORCID: https://orcid.org/0000-0002-0805-2249

II Nurse. Resident in Adult Health. Specialist in Urgency and Trauma at the Federal University of Triângulo Mineiro (UFTM),Uberaba, MG, Brasil. Email: deboraosacramento18@gmail.com ORCID: https://orcid.org/0000-0001-6448-8330

III Nurse. MSc in Public Health. Professor of the Department of Medicine and Nursing at the Federal University of Viçosa (UFV),Viçosa, Minas Gerais, Brasil. E-mail: flaviabatista@ufv.br ORCID: https://orcid.org/0000-0003-2360-3026

IV Nurse. PhD in Nursing. Professor of the Department of Medicine and Nursing at the Federal University of Viçosa (UFV),Viçosa, Minas Gerais, Brasil, E-mail: luana.toledo@ufv.br, ORCID: http://orcid.org/0000-0001-9527-7325

V Nurse. MSc in Nursing. Professor at the Federal University of Tocantins (UFT), Palmas, Tocantins, Brasil. E-mail: renansallazar@gmail.com ORCID: https://orcid.org/0000-0001-5140-4046

VI Nurse. PhD in Nursing. Professor of the Department of Medicine and Nursing at the Federal University of Viçosa (UFV), Viçosa, Minas Gerais, Brasil, E-mail: katiusse@ufv.br ORCID: https://orcid.org/0000-0003-3393-8567

em consultas de enfermagem. Realizaram-se entrevistas com roteiro semiestruturado e utilizou-se a técnica de análise de conteúdo. Os dados foram coletados entre os meses de janeiro e agosto de 2017. **Resultados:** observou-se que ter força de vontade, apoio familiar e multiprofissional, conhecimento sobre a patologia e formas de prevenção e medo da morte facilitou a adesão; por outro lado, pouco conhecimento, preguiça, falta de infraestrutura urbana e condições climáticas, hábito de consumir alimentos não saudáveis, bebidas alcoólicas e tabaco, custo do tratamento e esquecimento de tomar a medicação dificultaram a adesão. **Conclusão:** o tratamento da hipertensão acarreta mudanças na dinâmica da vida para as quais é fundamental ter força de vontade, apoio familiar e profissional, além de superar hábitos não saudáveis.
Descritores: Enfermagem; Hipertensão; Cooperação do Paciente; Cooperação e Adesão ao Tratamento; Adesão à Medicação

Resumen: **Objetivo:** describir la percepción de las personas con hipertensión arterial sobre los aspectos que facilitan y dificultan la adherencia al tratamiento. **Método:** estudio cualitativo descriptivo desarrollado con 16 personas atendidas en consultas de enfermería. Se realizaron entrevistas con un guion semiestructurado y se utilizó la técnica de análisis de contenido. Los datos se recopilaron entre enero y agosto de 2017. **Resultados:** se observó que tener fuerza de voluntad, apoyo familiar y multidisciplinario, conocimiento sobre la patología y las formas de prevención y miedo a la muerte facilitaba la adherencia; por otro lado, poco conocimiento, pereza, falta de infraestructura urbana y condiciones climáticas, hábito de consumir alimentos no saludables, bebidas alcohólicas y tabaco, costo de tratamiento y olvido de tomar el medicamento obstaculizaba la adherencia. **Conclusión:** el tratamiento de la hipertensión provoca cambios en la dinámica de la vida para los que es esencial contar con fuerza de voluntad, apoyo familiar y profesional, además de superar hábitos poco saludables.
Descriptores: Enfermería; Hipertensión; Cooperación del Paciente; Cumplimiento y Adherencia al Tratamiento; Cumplimiento de la Medicación

Introduction

Arterial hypertension (AH) is a chronic condition of a multifactorial and silent nature. It presents with impaired balance of vasodilator and vasoconstrictor mechanisms and its diagnosis is made from high and sustained blood pressure levels greater than or equal to 140 x 90 mmHg.[1] The overall prevalence of this pathology is approximately one billion.[2] In Brazil, the estimates show that 32.5% of adult individuals and more than 60% of the elderly present AH.[3] Furthermore, it is the main risk factor for all-cause mortality and, mainly, for cardiovascular diseases (CVD), contributing directly or indirectly to the global burden of diseases and in years of life lost due to disabilities.[1-2]

The main risk factors for AH are obesity, insulin resistance, increased consumption of alcoholic beverages and salt, advanced age, sedentary lifestyle, stress and low potassium and

calcium intake. Treatment includes pharmacological measures based on the use of antihypertensive and/or non-pharmacological measures such as healthy diet, physical activity, increased potassium and calcium intake, control of body weight, decreased consumption of salt and alcoholic beverages, and combating smoking.[1,4]

AH remains a condition of difficult epidemiological control, especially due to the low adherence of the patients to medium and long-term treatment, which occurs in about 50% of cases.[5-6] Adherence is affected by socioeconomic conditions (low income and schooling, difficulty in accessing health services, cost of medications) and by factors related to the disease itself, the therapy and the health system and teams (inadequate distribution of medications, lack of training of teams on chronic disease management).[6] Effective control of AH also depends on the patient's understanding of their clinical condition and treatment.[6-7]

However, little success has been achieved in terms of effective adherence and control of AH, which remains an important public health problem.[6,8] Therefore, considering the magnitude of AH, non-communicable diseases (NCD) in the current context and the complexity that involves the phenomenon of adherence, deepening the understanding of the way individuals think and act will contribute to greater detailing and knowledge of the facilities and barriers found to follow the treatment of AH.

In this context, the research question that guides this study is which aspects facilitate and which aspects hinder adherence to the treatment of AH from the perception of people with AH? To answer these questions, we conducted a study with the objective of describing the perception of people with AH of the aspects that facilitate and those that hinder adherence to treatment.

Method

This is a descriptive study with a qualitative approach conducted with people with AH registered in a cardiovascular risk prevention program linked to a public educational institution

in southeastern Brazil. The program emerged in 2003 as a university extension project, aiming to provide diet-therapeutic care to government workers and family members, as well as students, who presented cardiovascular risk factors. This initiative was due to the increased occurrence of non-communicable diseases (NCDs) such as hypertension, dyslipidemias, diabetes and obesity, which, together, are known as metabolic syndrome and are associated with high mortality from CVD in Brazil.

Currently, the program operates in an outpatient service created by the university. It offers individual care of Nursing, Nutrition and Physical Education and performs collective educational activities to contribute to the improvement of self-care and dietary pattern, as well as sensitize registered patients to adopt a healthy lifestyle. A team composed of students, professors and professionals from those areas carry out the follow-up.

To conduct this study, we consulted the records of all 115 Nursing consultations performed in 2016. Fifty-two patients who met the following inclusion criteria were eligible: having a diagnosis of AH and having regularly attended Nursing consultations in 2016. The exclusion criteria adopted was the presence of any limitations that prevented them from responding to the researcher. From the total of 52 eligible patients, 16 were interviewed as this number reached the theoretical data saturation. The participants were randomly defined.

Data collection occurred between January and August 2017, and the invitation to participate was made by telephone contact or, personally, when patients attended the care service. A semi-structured interview guide prepared by the researchers was used, which was composed of two parts: the first one with sociodemographic questions; and the other one with two kinds of questions: a) about their understanding of AH, b) what facilities and difficulties were found to adhere to pharmacological and non-pharmacological treatment (diet, physical activity, reduction of alcohol consumption and smoking cessation). Moreover, the Morisky-Green test was applied to evaluate adherence to drug treatment.[9]

The interviews were scheduled according to the participants' availability, lasting an average of 25 minutes, and were recorded on a digital recorder after the interviewees' approval. Subsequently, the statements were fully transcribed in order to enable reliable analysis and interpretation of the results. The end of the collection occurred after identifying the theoretical saturation of the data, that is, the inclusion of new participants was no longer necessary due to repeated information.

For the analysis, the Content Analysis Technique was used, which consists of three phases: pre-analysis, exploration of the material and treatment of the results. The first aims to organize the material, and involves four steps: floating reading, which is the establishment of contact with the documents of data collection; the choice of what will be analyzed; the formulation of hypotheses and objectives; the organization of these hypotheses or objectives based on the cutouts of speeches that are repeated very often. This last step will determine the themes that will guide interpretation and inference. In the second phase, there are the coding, the choice for record units, classification according to themes and categorization, i.e., the meeting of a greater number of correlated themes. Finally, in the treatment of the results, inferences and interpretations of the manifest and latent content of the data are made.[10]

The ethical guidelines established by Resolution 466/2012 were respected, the research was approved by the Research Ethics Committee of the public educational institution (Opinion n. 1.821.610 approved on 11/16/16) and all participants signed the Informed Consent Form. For confidentiality purposes, participants were coded with the letter E, followed by the sequence number of the interviews.

Results and discussion

Considering sociodemographic characteristics, among the 16 participants, ten were women (62.5%) and six men (37.5%) and their ages ranging from 40 to 70 years of age. Moreover, most participants were over 60 years old (43.7%), white (62.5%), married (81.2%) and with

elementary education (62.5%). The professionals such as porters, peasants and nursing assistant were the most frequent; the family income was three to four minimum wages (minimum wage in 2017- R$ 937.00) and the half of the participants (50%) shared the house with three more people.

As for clinical profile, 14 participants (87.5%) reported other pathologies in addition to AH, such as diabetes mellitus, dyslipidemia, heart disease and three had previous complications, such as Myocardial Infarction (MI) and Cerebrovascular Accident (CVA) and kidney injury.

Regarding physical activities, eight interviewees (50%) practiced at least 150 minutes of some exercise per week; the others, on the other hand, were sedentary. With regard to food consumptions, the majority (68.7%) reported avoiding: the consumption of industrialized seasonings with high sodium content, the use of saltshaker on the table, the seasoning of foods with a lot of salt and the consumption of sausage and canned products. None of the interviewees were smokers, seven reported being former smokers (43.7%) and three (18.7%) consumed alcoholic beverages.

The profile of the participants showed that, in general, they were people with older age, low schooling, and some of them already had complications of AH and had others NCDs. These associated factors can contribute substantially to both the occurrence of AH and its complications such as MI, CVA, heart and renal failure and even death.[8]

The World Health Organization (WHO) recommends intervention in modifiable risk factors in order to reduce the high prevalence rates of NCDs. Therefore, it is essential to have a healthy lifestyle that includes not only an increase in the consumption of fruits and vegetables and practicing of physical activities but also a reduction of salt, overweight, obesity and harmful alcohol use. For such changes to occur, there is a need to strengthen health policies and systems, especially primary care, in addition to raising awareness among people with AH about the importance of prevention and self-care. [7-8, 11]

In this study, the interviews were analyzed in order to identify the perception of people with AH of the aspects that facilitate and/or hinder adherence to the treatment. From this analysis, two

categories emerged: 1) aspects that facilitate adherence and 2) aspects that hinder adherence. Each one brings the participants' perceptions of the practice of physical activities, food consumption, the use of alcoholic beverages and cigarettes, and pharmacological treatment.

Aspects that facilitated the adherence

The interviewees identified several aspects that enhanced adherence to the treatment of AH. Among them, the urban infrastructure for the practice of physical activities, the support of community, family and health professionals, the desire to live a healthier life and understanding the need for treatment were highlighted.

With respect to physical activity, the company of friends and family during practices, the insertion in groups of elder activities, walks and the use of bicycles as a means of transport contributed to the participants staying physically active. Furthermore, the preponderant role of willpower in adopting a healthier lifestyle was emphasized. Another aspect positively stressed was the existence of adequate and safe places near to the residence, as stated in the following reports:

> *The place I live makes it much easier because there is a trail to walk.* (E13)
> *I feel much better in the elder group and I like it a lot. It is when we get a lot distracted because of our mates.* (E5)

> *My everyday walk is from my daughter's school to where I take the van to go to work. I set this up - go on foot to not becoming sedentary. [...] and this was the only way to do it. I also know that, to control my blood pressure and cholesterol, I needed physical activity.* (E9)

> *The walk is a pleasurable thing, two other neighbors and I go, one animates the other, it is when we chat, distract, it is pleasurable.* (E14)
> *The fact that I go to work by bike. It was a decision I made because I could not control glycated hemoglobin. I rode a motorcycle, so I started riding my bike.* (E1)

> *What makes it easier? The willpower itself.* (E7)

The increase in physical activities, especially during leisure time, is associated with decreased blood pressure (BP) and risk factors for AH, such as the accumulation of abdominal and visceral adipose tissue.[12] Therefore, some aspects can contribute to a more physically active life and better control of BP, for example: a) good infrastructure for exercising in different environmental conditions , b) the proximity to appropriate places to the practice of physical activity, c) the perception of health status and d) the willpower to practice the activities.[8,13]

Moreover, having the company of family/community people stimulates the desire to exercise. The practice when carried out in groups can not only promote social interaction, build and strengthen friendships, but also it makes it more favorable to one group member encourages another, enhancing their commitment to self-care.[14] Another facilitating aspect was the use of the route to work or to take the children to school to abandon sedentary lifestyle. Attitudes such as these have been a trend, especially in the economically active population that exchanges vehicles for walking, cycling or even running in order to achieve better quality of life and health.[8]

Regarding food consumption, family and professional support, willpower, motivation, respect for food preferences and the substitution of salt by aromatic herbs were listed by the participants as points that favor adherence to the diet. The following reports stress these aspects:

> *My son and husband are always on me to follow everything that nutrition and the doctor prescribe and buy things from the diet.* (E12)

> *People confuse that well-seasoned food has to be very salty. Well-seasoned is being able to choose the right types of seasonings, the types of herbs that will flavor and people want to put salt and salt, on the contrary, it even steals the flavor.* (E2*)*

> *Willpower. Once you realize how our organism improves with good nutrition, willpower increases.* (E9)

> *The diet was done with the things I like.* (E13)

> *Coming to the nutritionist helps follow the diet. She always answers my questions and says everything that is good and bad; it helps a lot, because my wife and I do not have much study to know these things.* (E15)

It is well established that dietary patterns rich in fruits, vegetables and legumes, whole grains, low saturated-fat dairy products and low sodium content are associated with BP reduction.[15] In addition, the consumption of this type of diet favors the intake of bioactive components, related to a decrease in BP, such as the classes of flavonoids, present in fruits, vegetables, in some teas, in wine and cocoa, and of anthocyanins, found in fruits and vegetables of reddish color (such as *açaí*, grape, apple, strawberry, cherry, acerola and purple cabbage) and micronutrients such as potassium and calcium.[1,16]

The change in the eating can occur with the gradual insertion of foods with protective effect and that are palatable. Moreover, when the family supports the person with AH and opts for healthy food choices, they encourage him/her to adhere to the long-term dietary plan.[14,17] Similarly, nutritional counseling can enhance adherence by providing information on the types of foods that should be consumed and avoided.[18]

Concerning the consumption of alcoholic beverages, not having the habit of drinking, excessively, or drinking juices, water and soft drinks as an alternative to ethyl helped them in the treatment of AH. It is also noteworthy that the desire to maintain or improve health, the fear of changing BP and dying and the guidance received from health professionals drove behavioral changes, according to the following statements:

> *It is getting used to it because I had never had an addiction, my father scolded, so we have always watch for it.* (E1)

> *When I am at parties or a place with people drinking if they have juice, water and even soda, I use and so I do not feel like it. I do not drink beer, which I am afraid to change the pressure.* (E5)

> *I started taking blood pressure medication, I cannot keep drinking. I was told to exchange the drinks for teas and use some herbs, so my headaches got a lot better, than was when I realized that the drinks were a bad thing.* (E9)

> *As I became very ill and was hospitalized, the doctor said that drinking any alcoholic beverage could even kill me.* (E14)

The consumption of alcoholic beverages, culturally, is considered as an agent of social interaction, which promotes joy and fun and, for men, associates with the exercise of masculinity. However, excessive consumption makes individuals more vulnerable to situations of risk to health, violence and accidents.[19] Alcohol users are twice as likely not to adhere to AH treatment. In addition, habitual consumption associates with elevation with BP in a linear way.[1]

The perception of the participants was that persistence, will, setting goals, family support and the aid of medications helped them to quit smoking.

> *I smoked for many years, my wife was always on me to stop, I tried and could not. When my son was born, I only smoked outdoors and was reducing until I stopped.* (E14)

> *The first days were difficult, so I avoided going out, drinking coffee, drinking beer and meeting with friends.* (E2)

> *I followed the treatment, took medication, used adhesive. My children and my husband helped me a lot.* (E11)

> *I set the date I was going to stop, the day I turned 50. As I was aware that it was a month, a week, a year or a day ahead so I erased the idea of cigarettes*. (E2)

Smoking cessation associates with lower cardiovascular risk; however, its effects on BP reduction are not entirely clear. Stopping cigarette use is beneficial for BP control and regular use of antihypertensive drugs, improving the prognosis of people with AH.[1]

Quitting smoking is a difficult decision and takes time to happen. The person needs to find reasons that strengthen their intrinsic motivation, such as the birth of their child and the establishment of the day one of quitting. The extrinsic motivations are important as well as the family support and encouragement. Furthermore, psychological support and associated drug treatments increase the chances of success.[20]

Participants also reported that recognizing that the habit was harmful to health contributed to strengthen the desire to not smoking. Likewise, living the experience of their own illness, or of people close to them, helped raise awareness of the damage caused by smoking. The following statements summarize such ideas:

> *It is for the high blood pressure indeed. The doctor told me that smoking is very harmful to everyone and especially to those who have a pressure problem.* (E7)

> *My father was a smoker and snuff smeller (smoke consumed grated through administration by the nasal mucosa), ended up dying with lung problems. Seeing what he went through stimulated me to quit smoking and, at the same time, I got ill with pneumonia and it forced me to stop.* (E1)

> *Nicotine started to hurt my teeth and I had to undergo a dental treatment. I had to get implants. If I do not cooperate, I am going to miss a very expensive treatment.* (E2)

The existence of health problems and financial burdens and the fact of sharing other people's experiences of illness are aspects that strengthen the decision to quit smoking.[20] Sometimes, the onset of diseases or hospitalizations due to smoking-related problems constitutes a milestone for cessation. In this case, this decision implies the concern to have good health conditions and an increase in survival, making the person more receptive to changes in habit.[21]

In turn, the adherence to pharmacological treatment was evaluated by applying the Morisk-Green scale.[9] The results showed that eight people were adherent and eight non-adherent. Participants portrayed that they used reminders and sound devices to help them remember to take the medication. They also pointed out that the will, the joy of living, the family support and the fear of complications motivated them to take better care of their health. The following reports bring together these aspects:

> *Willpower to follow everything right, afraid of making my health worse and dying. I enjoy living; I take care of my health to be able to do everything I like* [...] *my husband keeps asking if I have already taken the medicine when it is time.* (E13)
>
> *I put it on my bedside table, so I wake up and take it, because that is the first thing I see*. (E2)
>
> *I set the alarm at the time of taking the medicine.* (E6)

Adherence to the drug treatment of AH is essential for reducing morbidity and mortality from CVD. The fear of health problems and positive attitudes, such as joy and pleasure to live, contribute to increase the willingness to use medications.[22] The perception of support and active family participation in treatment provide support and encouragement to cope with the changes imposed by diseases.[17] In addition, when the person with AH recognizes the need and accepts treatment, he/she creates simple and effective strategies to avoid inappropriate use and/or forgetfulness.[7]

It is noteworthy that treatment adherence should be seen as a multidimensional phenomenon. It involves subjective issues such as habits, beliefs and knowledge, but also objective aspects linked with two points: a) the health system, such as access to the services, and medications and b) to the therapy, such as side effects. In this context, the person with AH finds challenges to conduct the treatment properly and should not be considered the only person responsible when failure occurs. [6]

Aspects that hindered the adherence

In this research, the participants knew little about the pathology and forms of prevention. They related AH to its symptoms, its chronicity and the risk of complication and death:

> *It is when you get a headache and your legs get swollen.* (E8)
>
> *I do not know, the doctor said I had this and it was lifelong.* (E14)
>
> *It is a heart problem that can kill.* (E12)

Identifying the patient's knowledge represents an initial stage of follow-up. Little knowledge can lead to non-perception of the severity and the risk of complications, to lack of interest in the problem and, consequently, to low adherence.[7,11] Therefore, investing in the educational process has an impact on the health promotion of people with AH and may favor changes in life habits, more conscious and healthier choices, as well as the reduction of cardiovascular risk.[11]

Regarding the practice of physical activities, the participants mentioned laziness, lack of time due to work, unfavorable weather conditions and physical discomfort as a result of some pathology as main difficulties. The following statements summarize these themes:

> *The difficulty is the laziness itself.* (E1)
>
> *Today, what makes it difficult is my job. I get up early, I come to work, and in the afternoon, when I get home, I want to take a shower and rest, so I do not have time to do anything.* (E3)
>
> *It is because I have leg pain.* (E4)
>
> *The arrhythmia I have in my heart, I feel a lot of change in my heart because of this arrhythmia.* (E5)
> *The cold bothers me a little.* (E10)

Adults who do not practice at least 150 minutes of moderate physical activity per week are considered sedentary.[1] Overcoming sedentary lifestyle and accommodation imposes changes in the dynamics of life that are not always easily welcomed by the person with AH, especially those who do not have the habit of exercising.[23]

For physically active people, unfavorable weather conditions can reduce or interrupt activities, a fact most evident in winter and in regions with unstable climates. In relation to those who work, the demands, schedules and overload can result in a shorter time dedicated to health care. Finally, pathologies, pains and discomforts end up contributing to physical inactivity.[13,23]

Considering diet, participants reported that what hindered compliance with the recommendations was the habit of consuming unhealthy foods or prepared by third parties, participation in parties, eating outside the home, little knowledge about what to eat and the effects of diet on AH. Allied to this, some faced the resistance of the family to abstain from excess salt.

> *The problem is that we have a house cleaner, sometimes she misses in dosages. Saturday and Sunday we usually have lunch in restaurants, you cannot control the seasoning of the restaurant's cook*. (E2)

> *Since I was a kid, I got used to eat a lot of fatty, seasoned, industrialized food.* (E6)

> *I am the one who cooks at home. If I cook without salt, just following the diet, I think no one eats it. They do not have to eat unsalted food because of me. Once I tried to cut the salt and they complained.* (E14)

> *It knows the foods I cannot eat. I was eating some stuff thinking it was okay. When I talked to the nutritionist, she cut it off and said that it increases the blood pressure*. (E15)

Family support can contribute to the person with AH performing changes in food and better accepting the need for salt reduction and changes in flavors.[17,24] The diet made at home can prioritize unprocessed and minimally processed foods to the detriment of ultra-processed

foods, which represents a way to improve the quality of what is consumed and has been associated with better results of blood pressure levels. [25]

Eating outside the home hinders following the recommended diet. The supply of ultra-processed foods, rich in salt, saturated fats and free sugar, like fast foods, is higher and does not allow for controlling the amount of these nutrients in foods prepared by third parties. Participation in parties also represented a barrier, because in these environments, there is great availability of unhealthy foods, sugary drinks, such as soda and industrialized juices, and alcoholics, making the diet follow-up more arduous. Moreover, food has a cultural and social role that surpasses nutrition.[11]

It is not uncommon for people with AH to have insufficient knowledge about the recommended amount of sodium per day (2g, i.e., 5g of sodium chloride), and difficulties in understanding the information on the labels. Knowing the foods that should be avoided and understanding how much excess salt alters the physiological mechanism of BP can contribute to the prevention of AH and its complications.[24]

Concerning the consumption of alcoholic beverages, it is known that they favor social interaction, provide well-being and cause pleasure, hindering its reduction. The following statements illustrate the participants' perceptions of these points:

> *It was the pleasure I felt drinking, I did not drink at home, I went out to relax and enjoy something and the beer was making me well back then, it was the pleasure, the social well-being.* (E2)

> *Drinking beer is a hobby, sitting in a bar, having a beer, going to the forró, I have my beer, so I go and do not drink anything? Then I get discouraged, when I drink I get more excited, more energetic and feel better.* (E7)

> *I has just divorced so I wanted to enjoy life, hang out with her friends, and have fun, drink.* (E9)

The reports show that the social representation of alcohol consumption is permeated by positive beliefs about its socializing/integrating role. In this context, especially men to entertain and favor interpersonal relationships use it. However, these people are exposed to a higher risk of dependence and the onset of diseases.[19]

Habitual and excessive alcohol consumption positively associates with increased BP and the incidence of AH. Therefore, it is recommended not exceeding a dose (14g ethanol equivalent to 350 ml of beer, 150 ml of wine or 45 ml of distilled beverage) for women and people with low weight and two doses for men.[1]

Regarding smoking, participants recognized that smoking generates dependence, but also reported that it provided pleasure and relief from stress. Moreover, when interrupting the use, they had to deal with relapse triggers, such as environments with people smoking and daily emotional changes. These elements are present in the statements:

> *The difficulty was addiction, if your willpower is not strong enough, you cannot stop. When you smoke, you relax or think you are relaxing, but the cigarette is not an enemy, it is a friend, the beer is not an enemy, it is a friend, the beer is not aggressive, it is harmless, because it relaxes the same thing for the cigarette.* (E2)

> *It made me nervous and trembling, so I had to smoke.* (E11)

> *I got up in the morning and said, 'today I am not going to smoke'. When I thought I was not, I was smoking a pack of cigarettes. In my service I could smoke, colleagues all smoking, so all this makes it difficult.* (E6)

The use of cigarettes, for many people, helps to reduce daily stress, especially when they believe that smoking brings tranquility and helps to deal with unwanted emotions.[20] Quitting smoking is a difficult experience, because dependence is a complex phenomenon that encompasses behavioral, cognitive, social and physiological aspects.[20] The therapeutic approach based on the combination of cognitive interventions with behavioral skills training and/or

educational interventions associated with pharmacotherapy (nicotine replacement and bupropion) are resources that increase treatment success.[20-21]

Finally, the main difficulties mentioned regarding adherence to pharmacological treatment were: forgetfulness cost of medications, visual deficit and unwanted effects of treatment. Such considerations can be identified in the statements:

> *Sometimes I had to go out and forgot to take that day.* (E6)
>
> *As a student, I lived on a scholarship to support my daughter, and me so I had difficulty buying the medicine.* (E9)
>
> *My difficulty is knowing which pill I have to take in the morning and which one I have to take at night, my eyesight is not too well and I cannot read.* (E14)
>
> *The first medication gave me side effect.* (E2)
>
> *Oh! I find it boring, but I have to take it.* (E11)

Socioeconomic status can negatively influence adherence to hypertension treatment. People with lower family income may have more difficulties in accessing health services and medications. In this sense, the Unified Health System (UHS) has guaranteed free access; however, there is still a need to strengthen public policies to reduce inequalities in access to medicines in the country.[22]

It is noteworthy that access alone does not guarantee good results, as many people with AH may have difficulties with treatment management. The number of medications used is directly associated with forgetfulness, the use of three or more increases the chance of not remembering. Therefore, when the combination of drugs is necessary, it is essential that teams seek strategies, together with patients and families, in order to reduce the rates of forgetfulness.[22]

The use of a greater number of medications can also lead to the appearance of some organic discomfort, leading the patient to do the treatment irregularly or abandon it. In order to

be effective and facilitate adherence, pharmacological treatment should have little or no adverse effects and not negatively interfere with quality of life. In addition, the increased age commonly decreases visual acuity. This condition may interfere with the ability to read information on packaging and recall medications, doses and times.[1,6,22]

Finally, it is noteworthy that the present investigation had as limitation the fact of having a small number of participants and a single service as a scenario. Thus, the complexity of the experiences may have been partially portrayed, although, when investigating aspects of human behavior, certain patterns tend to be repeated.

Conclusion

For the participants of this study, AH resulted in the need to adapt to a new condition. Consequently, it required the introduction of new life habits and the search for other meanings for the experience with food, physical activity, alcoholic beverage, smoking and pharmacological treatment. The change in lifestyle resulting from illness is a learning process marked by gradual progress. Willpower, family and multidisciplinary support, knowledge of the health condition and the importance of treatment and fear of death help to experience this stage of transformations.

Nevertheless, it is not easy to modify behaviors, habits and beliefs consolidated throughout life, nor to learn new ways of taking care of health. The treatment of AH also implies dealing with challenging situations that need to be overcome, such as demotivation to perform physical activities, lack of urban infrastructure, climatic conditions such as cold, the habit of consuming unhealthy foods, alcoholic beverages and cigarettes, the cost of medications and the forgetfulness of medication.

Given the epidemiological magnitude of AH, its impact on people's quality of life and that low adherence to pharmacological and non-pharmacological treatment affects their results,

it is emphasized that the findings of this research have important practical implications with regard to the importance of involving the family in care, as a source of support, to enhance the motivation and adherence of patients.

In addition, individual or collective educational activities performed by multidisciplinary teams aimed at health promotion can be promising strategies to expand the knowledge, empowerment and autonomy of people with AH for self-care.

It is worth noting that, upon investigating a relevant theme for Nursing, collective health and health promotion, this research can contribute to health professionals and, especially, nursing professionals, with more in-depth information about intrinsic aspects (knowledge, motivations, desires and beliefs) and extrinsic aspects (family, environment, socioeconomic conditions) that affect adherence to AH treatment and the choice of healthier behaviors for self-care.

References

1. Sociedade Brasileira de Cardiologia. 7ª Diretrizes Brasileiras de Hipertensão Arterial. Arq Bras Cardiol [Internet]. 2016 [acesso em 2019 mar 18]; 107(3): Supl. 3. Disponível em: http://publicacoes.cardiol.br/2014/diretrizes/2016/05_HIPERTENSAO_ARTERIAL.pdf

2. Forouzanfar MH, Liu P, Roth GA, Ng M, Biryukov S, Marczak L, et al. Global burden of hypertension and systolic blood pressure of at least 110 to 115 mm Hg, 1990-2015. JAMA Netw Open. 2017; 317(2):165-82. doi: https://doi.org/10.1001/jama.2016.19043

3. Malta DC, Gonçalves RPF, Machado IE, Freitas MIF, Azeredo C, Szwarcwald CL, et al. Prevalence of arterial hypertension according to different diagnostic criteria. Rev Bras Epidemiol. 2018; 21(Suppl 1):e180021. doi: https://doi.org/10.1590/1980-549720180021.supl.1

4. Oparil S, Acelajado MC, Bakris GL, Berlowitz DR, Cífková R, Dominiczak AF, et al. Hypertension. Nat Rev Dis Primers. 2018; 4:18014. https://doi.org/10.1038/nrdp.2018.14

5. Abegaz TM, Shehab A, Gebreyohannes EA, Bhagavathula AS, Elnour AA. Nonadherence to antihypertensive drugs: a systematic review and meta-analysis. Medicine (Baltimore). 2017; 96(4):1-9. https://doi.org/10.1097/MD.0000000000005641

6. World Health Organization (WHO). Adherence to long-term therapies: evidence for action [Internet]. Geneva: WHO; 2003 [cited 2019 Mar 18]. Available from:

https://www.who.int/chp/knowledge/publications/adherence_full_report.pdf?ua=1

7. Santos RZ, Bonin CDB, Martins ETC, Pereira Junior M, Ghisi GLM, Macedo KRP, et al. Development and psychometric validation of HIPER-Q to assess knowledge of hypertensive patients in cardiac rehabilitation. Arq Bras Cardiol. 2017; 110(1):60-8. doi: https://doi.org/10.5935/abc.20170183

8. World Health Organization (WHO). Global status report on noncommunicable diseases 2014 [Internet]. Geneva: WHO; 2014 [cited 2018 Jan 08]. Available from: https://www.who.int/nmh/publications/ncd-status-report-2014/en/

9. Morisky DE, Green LW, Levine DM. Concurrent and predictive validity of a self-reported measure of medication adherence. Med Care. 1986; 1(24):67-74. doi: http://doi.org/10.1097/00005650-198601000-00007

10. Bardin L. Análise de conteúdo. Lisboa: Edições 70; 2011.

11. Machado JC, Cotta RMM, Moreira TR, Silva LS. Análise de três estratégias de educação em saúde para portadores de hipertensão arterial. Ciênc Saúde Colet. 2016; 21(2):611-20. doi: https://doi.org/10.1590/1413-81232015212.20112014

12. Liu X, Zhang D, Liu Y, Sun X, Han C, Wang B, et al. Dose-response association between physical activity and incident hypertension. Hypertension. 2017; 69(5):813-20. doi: https://doi.org/10.1161/HYPERTENSIONAHA.116.08994

13. Ribeiro AQ, Salgado SML, Gomes IS, Fogal AS, Martinho KO, Almeida LFF, et. al. Prevalence and factors associated with physical inactivity among the elderly: a population-based study. Rev Bras Geriatr Gerontol. 2016;19(3):483-93. doi: https://doi.org/10.1590/1809-98232016019.150047

14. Smith GL, Banting L, Eime R, O'Sullivan G, Van Uffelen JGZ. The association between social support and physical activity in older adults: a systematic review. Int J Behav Nutr Phys Act. 2017; 14(1):44-9. doi: https://doi.org/10.1186/s12966-017-0509-8

15. Paula TP, Viana LV, TZ Neto A, Leitão CB, Gross JL, Azevedo MJ. Effects of the DASH diet and walking on blood pressure in patients with type 2 diabetes and uncontrolled hypertension: a randomized controlled trial. J Clin Hypertens. 2015; 17(11):895-901. doi: https://doi.org/10.1111/jch.12597.

16. Vendrame S, Klimis-Zacas D. Potential factors influencing the effects of anthocyanins on blood pressure regulation in humans: a review. Nutrients. 2019; 11(6):1431-42. https://doi.org/10.3390/nu11061431

17. Bahari G, Scafide K, Krall J, Mallinson RK, Weinstein AA. Mediating role of self-efficacy in the relationship between family social support and hypertension self-care behaviours: a cross-sectional study of Saudi men with hypertension. Int J Nurs Pract. 2019; 25(6):e12785. doi: https://doi.org/10.1111/ijn.12785

18. Mahdavi R, Asl AB, Abadi MAJ, Namazi N. Perceived barriers to following dietary recommendations

in hypertensive patients. J Am Coll Nutr. 2017; 36(3):193-9. doi: https://doi.org/10.1080/07315724.2014.966176

19. Rosa LFA, Nascimento ARA. Representações sociais de bebida alcoólica para homens universitários. Arq Bras Psicol. 2015 [acesso em 2017 nov 20]; 67(1):3-19. Disponível em: http://pepsic.bvsalud.org/scielo.php?script=sci_arttext&pid=S1809-52672015000100002&lng=pt&nrm=iso

20. Jesus MCP, Silva MH, Cordeiro SM, Kortchmar E, Zampier VSB, Merighi MAB. Understanding unsuccessful attempts to quit smoking: a social phenomenology approach. Rev Esc Enferm USP. 2016; 50(1):71-8. doi: http://dx.doi.org/10.1590/S0080-623420160000100010

21. Kazemzadeh Z, Manzari ZS, Pouresmail Z. Nursing interventions for smoking cessation in hospitalized patients: a systematic review. Int Nurs Rev. 2016; 64(2):263-75. doi: https://doi.org/10.1111/inr.12320

22. Gewehr DM, Bandeira VAC, Gelatti GT, Colet CF, Oliveira KR. Adesão ao tratamento farmacológico da hipertensão arterial na Atenção Primária à Saúde. Saúde Debate. 2018; 42(116):179-90. doi: https://doi.org/10.1590/0103-1104201811614

23. Franco MR, Tong A, Howard K, Sherrington C, Ferreira PH, Pinto RZ, et al. Older people's perspectives on participation in physical activity: a systematic review and thematic synthesis of qualitative literature. Br J Sports Med. 2015; 49(19):1268-76. doi: http://dx.doi.org/10.1136/bjsports-2014-094015

24. Teixeira JF, Goulart MR, Busnello FM, Pellanda LC. Hypertensives' knowledge about high-sodium foods and their behavior. Arq Bras Cardiol. 2016; 106(5):404-10. doi: https://doi.org/10.5935/abc.20160049.

25. Mendonça RD, Lopes ACS, Pimenta AM, Gea A, Martinez-Gonzalez MA, Bes-Rastrollo M. Ultra-processed food consumption and the incidence of hypertension in a Mediterranean cohort: the Seguimiento Universidad de Navarra Project. Am J Hypertens. 2016; 30(4):358-66. https://doi.org/10.1093/ajh/hpw137

Scientific Editor: Tânia Solange Bosi de Souza Magnago
Associate Editor: Maria Denise Schimith

Corresponding author
Katiusse Rezende Alves
E-mail: katiusse@ufv.br
Address: Av. Peter Henry Rolfs, s/n, Campus Universitário – Viçosa, MG - CEP: 36570-900

Authorship contributions

1 – Paulo Roberto de Oliveira Miranda
Conception/planning of the study/research; obtaining, analyzing and interpreting the data; writing of the article.

2 – Débora de Oliveira Sacramento
Final review with critical and intellectual participation in the article.

3 – Flávia Batista Barbosa de Sá Diaz
Final review with critical and intellectual participation in the article.

4 – Luana Vieira Toledo
Final review with critical and intellectual participation in the article.

5 – Renan Sallazar Ferreira Pereira
Final review with critical and intellectual participation in the article.

6 – Katiusse Rezende-Alves
Conception/planning of the study/research; obtaining, analyzing and interpreting the data; writing of the article, final review with critical and intellectual participation in the article.

How to cite this article

Miranda PRO, Sacramento DO, Diaz FBB, Toledo LV, Pereira RSF, Rezende-Alves K. Perception of people with arterial hypertension about aspects that influence treatment adherence. Rev. Enferm. UFSM. 2021 [Access: Year Month Day]; vol.11 e6: 1-22. DOI:https://doi.org/10.5902/2179769242403