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ORIGINAL ARTICLE

Perceived barriers to blood pressure control: a qualitative study

Barreras percibidas para el control de las cifras de presión arterial: estudio cualitativo

Barreiras percebidas ao controle da pressão arterial: um estudo qualitativo

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ABSTRACT

Introduction: perceptions and barriers that hinder blood pressure control exist, and their identification is essential. **Objective:** to explore hypertensive patients' perceptions of blood pressure control and associated barriers. **Method:** this was a qualitative, exploratory, phenomenological study conducted in Pinar del Río, Cuba, with a purposive sample of 26 hypertensive patients. Perceptions and barriers to blood pressure control were explored through direct interviews. An inductive qualitative content analysis was conducted, respecting medical ethics. **Results:** five main barriers to hypertension control were identified, with patients reporting confusion about their condition, fear or mistrust of medications, inconsistent drug availability, limited access to specialists, and negative interactions with healthcare professionals. Lifestyle challenges were also identified, among other barriers, which together hinder effective disease management. The findings highlight the need for clear communication, culturally appropriate education, and strengthened support systems to improve adherence and promote healthy behaviors. **Conclusions:** barriers to hypertension control were identified, including lack of information, low adherence to treatment, deficiencies in health services, unhealthy lifestyles, and insufficient social support. Based on this, the need for comprehensive, patient-centered interventions to improve disease management, increase quality of life, and reduce related complications is emphasized.

Keywords: behavioral medicine; control; hypertension; qualitative research; perception

RESUMEN

Introducción: existen percepciones y barreras que dificultan el control de la presión arterial, siendo necesaria su identificación. **Objetivo:** explorar la percepción de pacientes hipertensos sobre el control de sus cifras de presión arterial y las barreras asociadas. **Método:** estudio cualitativo, exploratorio, de tipo fenomenológico, desarrollado en Pinar del Río, Cuba, en una muestra intencional de 26 pacientes hipertensos. Mediante entrevistas directas se exploraron percepciones y barreras para el control de la presión arterial, llevándose a cabo un análisis de contenido cualitativo inductivo, con respeto de la ética médica. **Resultados:** fueron identificadas cinco barreras principales para el control de la hipertensión, con reportes de los pacientes con confusión sobre su condición, miedo o desconfianza hacia los medicamentos, disponibilidad irregular de fármacos, acceso limitado a especialistas e interacciones negativas con profesionales de la salud. Fueron señalados, a su vez, desafíos en el estilo de vida, entre otras barreras, que de conjunto dificultan el manejo efectivo de la enfermedad. Los hallazgos resaltan la necesidad de comunicación clara, educación culturalmente apropiada y sistemas de apoyo fortalecidos para mejorar la adherencia y promover comportamientos saludables. **Conclusiones:** se identificaron barreras para el control de la hipertensión, se incluye la falta de información, baja adherencia al tratamiento, deficiencias en los servicios de salud, estilos de vida poco saludables y apoyo social insuficiente. En base a ello se enfatiza la necesidad de intervenciones integrales centradas en el paciente para mejorar el manejo de la enfermedad, aumentar la calidad de vida y reducir las complicaciones relacionadas.

Palabras clave: medicina de la conducta; control; hipertensión arterial; investigación cualitativa; percepción

RESUMO

Introdução: percepções e barreiras que dificultam o controle da pressão arterial existem, e sua identificação é essencial. **Objetivo:** explorar as percepções de pacientes hipertensos sobre o controle da pressão arterial e as barreiras associadas. **Método:** este foi um estudo qualitativo, exploratório e fenomenológico realizado em Pinar del Río, Cuba, com uma amostra intencional de 26 pacientes hipertensos. As percepções e barreiras ao controle da pressão arterial foram exploradas por meio de entrevistas diretas. Foi realizada uma análise de conteúdo qualitativa indutiva, respeitando a ética médica. **Resultados:** foram identificadas cinco principais barreiras ao controle da hipertensão, com pacientes relatando confusão sobre sua condição, medo ou desconfiança em relação aos medicamentos, disponibilidade inconsistente de medicamentos, acesso limitado a especialistas e interações negativas com profissionais de saúde. Além disso, foram identificados desafios no estilo de vida, entre outras barreiras, que, em conjunto, dificultam o manejo eficaz da doença. Os resultados destacam a necessidade de comunicação clara, educação culturalmente apropriada e sistemas de apoio fortalecidos para melhorar a adesão e promover comportamentos saudáveis. **Conclusões:** foram identificadas barreiras ao controle da hipertensão, incluindo falta de informação, baixa adesão ao tratamento, deficiências nos serviços de saúde, estilos de vida pouco saudáveis e apoio social insuficiente. Com base nisso, enfatiza-se a necessidade de intervenções abrangentes e centradas no paciente para melhorar o manejo da doença, aumentar a qualidade de vida e reduzir as complicações relacionadas.

Palavras-chave: medicina comportamental; controle; hipertensão; pesquisa qualitativa; percepção

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INTRODUCTION

Currently, non-communicable diseases have occupied much of the attention of the international community due to their implications. Among them, arterial hypertension (AHT), or high blood pressure (HBP), has positioned itself as one of the main health problems globally. According to data from the World Health Organization (WHO), this disease shows an approximate prevalence of 1.28 billion adults between 30 and 79 years old.[1] Although effective treatment protocols and well-defined preventive strategies are established, worldwide only one in five individuals manages to keep their blood pressure under control. In the Americas, it is estimated that in many countries the control rate does not exceed 30%.[2]

In the national context, arterial hypertension is a growing concern due to both its high incidence and prevalence rate, as well as the impact generated by it on the health system and the patient's daily life.[3] According to data from the Ministry of Public Health, the prevalence of this disease in the adult population exceeds 30%, and despite universal and free access to medical care and advances in screening, early diagnosis, and clinical follow-up, a considerable number of people still have uncontrolled blood pressure figures, even while undergoing treatment.[4] Specifically, about 40% of diagnosed patients do not achieve adequate control of their blood pressure, which generates a high burden of morbidity and mortality, and poses serious challenges for Primary Health Care (PHC).[5]

Different studies developed in the country have adopted a quantitative approach when addressing this problem, which means that they have been focused on measuring clinical indicators and evaluating adherence to therapeutic regimens. However, this approach is not sufficient to understand the nature of the phenomenon, as well as the reasons why many patients continue to have high blood pressure figures despite adequate diagnosis and medical follow-up. Thus, the existence of less visible barriers related to the dynamics of daily life, patient perceptions, socioeconomic conditions, cultural habits, and relationships with the health system is understood, which directly influence the genesis of the problem indicated.[6]

In this sense, the use of a qualitative approach offers a way to delve into the dissimilar circumstances that surround the hypertensive patient within their family and community environment.[7]. Factors such as low adherence to treatment (with rates below 60% nationally), the presence of non-salutogenic lifestyles (marked by the presence of sedentary lifestyle, poor eating habits, the presence of smoking and alcoholism), as well as a limited knowledge about the disease arise; all this together makes blood pressure control a daily challenge.

To the above, the irregular availability of antihypertensive drugs and the limited perception of risk by patients are added, which weakens commitment to treatment.[8,9] For all the above, the present study aims to explore the perceptions of the hypertensive patient on blood pressure control and associated barriers.

METHOD

A qualitative, exploratory, phenomenological study was developed in the Capitán San Luis popular council, of the municipality of Pinar del Río, Cuba where out of a total of 3286 hypertensive patients, treated in the 13 medical offices that belong to the "Luis Augusto Turcios Lima" University Polyclinic; 26 hypertensive patients were recruited as a sample through intentional sampling by criteria (patients with permanent residence in the area, active follow-up in the Family Doctor and Nurse Program, and previous diagnosis of arterial hypertension with at least one year of evolution before the study, without control of blood pressure figures) (two for each of the 13 medical offices), with the aim of obtaining relevant and in-depth information for the objectives of the study.

Data collection was carried out between January and February 2024 through face-to-face in-depth interviews, lasting between 20 and 60 minutes, recorded with informed consent. Two instruments were used: a closed questionnaire to obtain demographic data and an in-depth interview to explore perceptions and barriers in blood pressure control, as well as to collect sociodemographic data. These instruments were developed and validated by five specialists in the area, who offered suggestions to improve their quality.

The processing of the information was carried out through content analysis, which made it possible to decode the transmitted messages. The process was carried out independently by two researchers, with a subsequent review by a third, which guaranteed the coherence and reliability of the analysis. Recurrent data were coded as research categories and converted into units of analysis, which facilitated the study of the results, the elaboration of the main results and their subsequent discussion.[10]

Written informed consent was obtained from all participants before the start of the study, thus complying with the provisions of the Declaration of Helsinki. It is worth noting the notification to the participants about the principle of preserving the anonymity of the results. The study protocol was approved by the Ethics Committee and the Technical Advisory Council of the "Luis Augusto Turcios Lima" University Polyclinic. It verified compliance with ethical standards and guidelines during the research process.

RESULTS

Demographic characteristics

From the 13 medical offices, a sample of 26 hypertensive patients was recruited, as indicated previously. 65.4% of the patients were women, with an average age of 53.9 ± 12.6 years. Black skin color predominated in the sample (53.9%). 65.4% of the participants were married, 46.2% had a pre-university educational level and 80.8% lived with another person. The time elapsed since diagnosis ranged between 1 and 20 years, and most patients had been living with the disease for more than ten years (53.9%).

Perceived Barriers to Hypertension Control and Management

Following a detailed analysis of the interviews, five units of analysis or main themes emerged in relation to the perceived barriers to effective blood pressure control.

a) Unit of analysis: insufficient information

Patients reported during the interview that they were unaware of the severity of the disease and its possible consequences. Added to this is the fact that they do not understand the indicated therapeutic regimen. They also expressed confusion regarding the meaning and seriousness of their condition, as well as uncertainty about the prescribed medications, their purposes, and the correct way to take them.

In this regard, patient five (5) stated "(...) although I knew my pressure was a little high, I didn't think it was that serious. No one really explained to me what could happen if I didn't take care of myself." Similarly, patient 17 referred to it as "(...) although they told me I had hypertension, I don't really know what that means," and continues: "(...) I take the pills, but I don't understand why it's so important to do so." For his part, patient eight (8) stated "My doctor told me to take these pills in the morning and at night, but I'm not sure what each one is for, (...) sometimes I get confused and I don't know if I already took it or not, but I don't think it's that important." In this direction, patient twenty-one (21) commented: "They told me to take several medications, but they didn't tell me what each one was for. They just told me to take them, but I don't know (...) what objective it has that I take them or what they are for."

Patients highlighted barriers related to communication that affect the effective management of the disease. This includes unclear medical instructions, poor health education, as well as limited interaction; which generates confusion, insecurity, and lack of confidence, which affects the lack of knowledge and clarity, as illustrated by their testimonies.

In this sense, patient 11 related how: "(...) when I go to the consultation, the doctor talks about many things that I don't understand. Sometimes I'm ashamed to ask because I don't want them to think I'm stupid or don't understand anything." For his part, patient 15 alleged that "(...) they give me brochures with information, but they are full of terms that I don't know, and that confuses me more (...), it would be better if they explained it to me in simpler words."

In turn, patient 4 indicated how: "(...) during the consultation everything goes very fast (...), the doctor hardly lets me speak, he only writes in the medical record and gives me the prescription." In relation to this, patient 20 stated: "(...) I would like there to be someone who would explain things to me clearly, but there are always different doctors, and no one follows me up periodically."

b) Unit of analysis: low adherence to pharmacological treatment

A frequent theme when addressing this issue is inconsistent adherence to treatment, manifested either by frequent forgetting of doses or by personal interruption of medication. These behaviors reflect a limited understanding of the chronic nature of hypertension and the relevance of maintaining continuous pharmacological control.

Patient 6 stated: "(...), as for the medications, sometimes I simply forget. If I have a hectic day or leave home early, I realize at night that I did not take the pill. That happens to me quite often." Similarly, patient 14 referred to "(...) sometimes when I take the pills and I feel good, I think I'm cured and I stop taking them for a few days until I get sick again (...), I didn't know I had to continue, even if I felt good." Which is related by patient 19 when he indicated: "(...) I stopped taking them for a while because I felt good and I didn't want to be taking pills all my life."

Similarly, fears, beliefs, and preferences regarding treatment were identified among patients. This, accompanied by inadequate guidance from medical personnel, negatively influenced adherence and decision-making regarding the use of medications. In relation to this, patient 10 commented: "(...) I'm afraid of damaging my kidneys or liver. I heard that taking pills every day ends up affecting other organs." In turn, patient 7 expressed: "The pills made me feel dizzy and weak, so I stopped them. I was afraid that something worse would happen to me."

On the other hand, patient 22 highlighted that "(...) I don't want to depend on pills forever. I think that if I eat well and rest, my pressure will drop naturally." Correspondingly, patient 3 expressed: "(...) my neighbor told me to drink water with garlic every morning. I stopped the pills and started with that (...), and for a while it worked for me." Later he continued: "(...) I prefer to use herbs and concoctions, I don't trust chemicals much."

c) Unit of analysis: deficiencies in health services

Participants reported multiple difficulties related to the health system, either due to access to it or due to the continuity of care. One of the most mentioned problems was the irregular availability of medications. Several patients expressed that, despite having a medical prescription, they frequently could not obtain the drugs due to shortages in community pharmacies, which causes interruptions in treatment, with clear clinical repercussions. In this regard, patient 1 indicated that "Sometimes one goes and there is nothing (...), they tell me to come back in a few days, but you can't wait; it's the pressure that is at stake (...); also, when I return, the medicine rarely came in, and so it is difficult to control anything."

For their part, other problems that directly affect some participants are limited access to specialized consultations, delays in care, or bureaucratic processes. In correspondence with this, patient 16 commented that: "They gave me an appointment with the cardiologist in three months, and I already felt bad at that time. It doesn't make sense, (...) nobody knows if I'll be alive by that date." Similarly, patient 25 highlights how: "A lot of time is lost in paperwork (...), you go to ask for an order, and the same thing, there are no reagents available, or you have to wait to take the test. It's too much for someone who is already sick." For his part, patient 26 highlighted how: "They sent me to have some tests done (...), but the results never arrived (...), I had to call them several times for them to find out."

In relation to the negative perceptions about their interactions with health professionals, patients reported a lack of empathy on their part. They also reported problems related to poor coordination between the different levels of care, which affected the quality and continuity of the care received. An example of this was seen in the statement of patient 4, who referred: "(...) when I go to the hospital, I feel that they only want me to leave quickly, without really listening to what is happening to me. Sometimes I feel invisible." Similarly, patient 17 reported that: "It's not just the diagnosis; we also need to be understood and supported (...), but many times they seem indifferent to what we feel."

d) Unit of analysis: persistence of non-salutogenic lifestyles

Another barrier identified was the difficulty in modifying habits that directly affect the patient's health, especially in relation to diet and physical activity. Among the main obstacles identified was the lack of preparation or economic resources to make adjustments to the appropriate lifestyle; in addition to an important lack of motivation to make these changes.

In the case of patient 6, he detailed that: "I know I should eat with less salt, but at home they always cook with a lot. I have no idea how to change that without my family complaining." Patient 18, for his part, expressed that: "I don't have enough information, resources, or support to prepare a diet that fits my needs (...), it's difficult to change when you don't know where to start." Added to this is the criterion of patient 24 when he alleged that: "(...) sometimes I feel that I don't have the strength or time to exercise, especially after a long day of work."

Patients mentioned serious difficulties related to alcohol and tobacco consumption, these habits and the lack of consistency to eradicate them represent a significant challenge for the management of the disease. Associated with this, patient 5 said that: "I know that smoking and drinking don't help me, but it's difficult to quit when it's part of my life..."Similarly, patient 17 commented how: "(...) sometimes I start with good habits, but after a few weeks I go back to the same thing because I can't maintain the routine." The main conclusion in this regard is observed in the response given by patient 19 when he confessed: "(...) I don't always have the willpower to avoid alcohol, especially in meetings with family or friends (...), it's hard for me to be in an environment where they drink, and I can't avoid it."

e) Unit of analysis: inadequate family and social support

Patients also reported the existence of misunderstanding or minimization of their condition by the family or circle of friends. An exact idea of this phenomenon was observed in the response given by patient 2 when he commented: "My family doesn't really understand how serious my condition is; sometimes they act as if it were nothing." It can also be seen in the one given by patient 16 when he highlighted that: "(...) the stress at home affects me a lot; when the family is tense, I lose focus on my own care."

Added to this was the absence of community support networks and the negative influence of unhealthy environments, which contributed significantly to the difficulties in managing their health. An example of this was noted in the comment given by patient 11 when he said: "There are no support groups or community help around here, (...) so I feel alone facing all this." Added, in turn the message given by patient twenty-five 25 when he referred: "I live in a neighborhood where unhealthy habits reign; (...) it is difficult for me to remain firm when everyone around me smokes or drinks."

DISCUSSION

The qualitative nature of the study allowed for an in-depth approach to the complexity of the phenomenon, identifying five fundamental barriers perceived by patients for effective blood pressure control: the presence of insufficient information; low adherence to pharmacological treatment; the existence of deficiencies in health services; the consolidation or persistence of non-salutogenic lifestyles; accompanied by inadequate family and social support. These barriers were understood for their multidimensional impact on the management of hypertension.

The presence of insufficient information on the part of the patient emerges as a fundamental obstacle that limits the patient's ability to understand their disease and prevents them from recognizing the importance of controlling it by adopting healthy behaviors. Studies developed by Miezah, et al. [11] and Ribeiro, et al. [12] have shown that inadequate education is associated with lower adherence and poorer blood pressure control, especially when the information is not adapted to the context or the individual needs of the patient. In light of this, the evidence suggests that the development of personalized and continuous educational interventions should be stimulated to improve the patient's knowledge, risk perception, and self-efficacy. [13]

Regarding adherence to treatment, especially pharmacological treatment, difficulties in following medication regimens due to side effects, forgetfulness, or absence of visible symptoms are very frequent. This problem is well recognized in the contemporary literature, where it is estimated that about 50% of patients do not adequately comply with their treatments. [14] This is influenced by psychological, social, and economic factors; therefore, improving it requires multifactorial strategies that include continuous support and simplification of treatment. [15]

It is undeniable to recognize the existence of deficiencies in health services, evidenced by limited access, delays, and lack of coordination, which negatively affect the continuity and quality of care. Recent research indicates how fragmented systems, with administrative barriers, hinder comprehensive care, increase the emotional burden of patients, and reduce adherence to treatment. [16] In light of this, improving the organization of services, accessibility, and communication between care levels is essential to optimize outcomes in hypertension. [17]

Currently, the consolidation of non-salutogenic lifestyles remains a central challenge. These include diets high in salt, carbohydrates, sugars, or fats; the presence of sedentary lifestyles and the consumption of harmful substances (alcohol and cigarettes). In this sense, studies have highlighted the difficulties faced by patients in modifying ingrained behaviors, especially without adequate support or changes in the environment. [18,19] For this, Krishnamoorthy, et al. [20] recommends the use of multicomponent interventions that integrate education, motivation, social support, and adaptations in the physical and social environments, demonstrating greater effectiveness in promoting healthy habits and blood pressure control.

The psychosocial component of this disease is fundamental. Insufficient family and social support constitutes a barrier that affects both adherence and emotional well-being. [21] Current evidence underscores the critical role of support networks in the management of chronic diseases, where lack of understanding and support can lead to isolation, stress, and decreased self-care. [22,23] Therefore, it is important to involve the family and the community in intervention programs, which guarantees strengthening these bonds and creating a favorable environment for the control of hypertension.

These results reinforce the need to address blood pressure control from a comprehensive perspective. The qualitative approach adopted, focused on the patient, despite having a specific sample which may limit the generalization of the findings, allows us to address in depth the nature of the phenomenon behind blood pressure control, by offering valuable contributions to design more effective interventions focused on the patient experience.

CONCLUSIONS

The qualitative study reveals that patients with hypertension face multiple barriers to adequate control of the disease, highlighting the lack of clear information, low adherence to treatment, and deficiencies in health services, such as limited access and poor coordination. In addition, the persistence of unhealthy habits, and insufficient family and social support hinder the adoption of the necessary changes.

These results reflect the importance of implementing comprehensive interventions focused on the patient and the perceptions of the same environment to their disease, which include continuous education, improvement in accessibility to services, as well as strengthening support networks with the aim of optimizing the management of hypertension.

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Conflicts of Interests:
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Supplementary Files:
Cuestionario y guía de entrevista cualitativa empleada en Barreras percibidas para el control de las cifras de presión arterial estudio cualitativo