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Adherence to pharmacological and non-pharmacological treatment of people with hypertension and diabetes mellitus

Adesão ao tratamento medicamentoso e não medicamentoso de pessoas com hipertensão arterial e diabetes mellitus

Adhesión al tratamiento medicamentoso y no medicamentoso de personas con hipertensión arterial y diabetes mellitus

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RESUMO

Objetivo: Compreender os determinantes e condicionantes associados à adesão ao tratamento de acordo com a perspectiva de pacientes hipertensos e diabéticos. **Método:** Trata-se de um estudo descritivo com abordagem qualitativa, com dez usuários atendidos em um centro especializado de atenção ao diabético e hipertenso, na cidade de Fortaleza, Ceará, Brasil. Foram realizadas entrevistas estruturadas com os usuários, entre junho e agosto de 2022, analisadas por meio do método de Análise de Conteúdo. **Resultados:** Dentre os principais resultados para facilitar a adesão, apresentam-se o desenvolvimento de um hábito para o tratamento, possuir um sentimento de bem-estar ao praticar medidas não farmacológicas, buscar conhecimento sobre as doenças, ter apoio familiar, possuir medo de agravamento da doença, e conviver com pessoas próximas com a mesma condição clínica. Por outro lado, o desconhecimento de medidas de controle das doenças, as falhas de comunicação entre profissional de saúde e paciente, condições financeiras precárias, negacionismo quanto ao diagnóstico, e limitações físicas e cognitivas dificultaram a adesão. **Conclusão:** Por fim, o tratamento da hipertensão e da diabetes pode acarretar mudanças na dinâmica do serviço de saúde e da rotina diária do paciente, sendo fundamental o desenvolvimento de estratégias que motivem o autocuidado do paciente, com o auxílio da abordagem interdisciplinar.

Descritores: Adesão ao Tratamento; Hipertensão; Diabetes; Determinantes de saúde.

ABSTRACT

Objective: *This study aims to understand the determinants and conditions associated with adherence to treatment from the perspective of hypertensive and diabetic patients.* ***Method:*** *This is a descriptive study with a qualitative approach, with ten users attending at a Specialized Care Center for Diabetics and Hypertensives, in the city of Fortaleza, Ceará, Brazil. Structured interviews were conducted with users between June and August 2022, analyzed using the Content Analysis method.* ***Results:*** *Among the main results to facilitate adherence were developing a habit for treatment, having a feeling of well-being when practicing non- pharmacological measures, seeking knowledge about the diseases, having family support, fearing the worsening of the disease, and living with close people with the same clinical condition. On the other hand, lack of knowledge about disease control measures, failures in communication between health professionals and patients, precarious financial conditions, denial regarding the diagnosis, and physical and cognitive limitations hindered adherence.* ***Conclusion:*** *Finally, the treatment of hypertension and diabetes can lead to changes in the dynamics of the health service and the patient's daily routine, and it is fundamental to develop strategies that motivate the patient's self-care, with the help of an interdisciplinary approach.*

Descriptors: *Treatment Adherence; Hypertension; Diabetes; Determinants of Health.*

RESUMEN

Objetivo: *Comprender los determinantes y condicionantes asociados a la adhesión al tratamiento de acuerdo con la perspectiva de pacientes hipertensos y diabéticos.* ***Método:*** *Se trata de un estudio descriptivo con enfoque cualitativo, con diez usuarios*

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atendidos en un centro especializado de atención al diabético e hipertenso, en la ciudad de Fortaleza, Ceará, Brasil. Fueron realizadas entrevistas estructuradas con los usuarios, entre junio y agosto de 2022, analizadas por medio del método de Análisis de Contenido. ***Resultados:*** *Entre los principales resultados para facilitar la adhesión, se presentan el desarrollo de un hábito para el tratamiento, poseer un sentimiento de bienestar al practicar medidas no farmacológicas, buscar conocimiento sobre la enfermedad, tener apoyo familiar, poseer miedo del agravamiento de la enfermedad, y convivir con personas cercanas con la misma condición clínica. Por otro lado, el desconocimiento de medidas de control de las enfermedades, los fallos de comunicación entre profesional de salud y paciente, condiciones financieras precarias, negacionismo con relación al diagnóstico, y limitaciones físicas y cognitivas dificultan la adhesión.* ***Conclusión:*** *Por fin, el tratamiento de la hipertensión y de la diabetes puede traer cambios en la dinámica del servicio de salud y de la rutina diaria del paciente, siendo fundamental el desarrollo de estrategias que motiven el autocuidado del paciente, con el auxilio del enfoque interdisciplinar.*

Descriptores: *Adherencia al tratamiento; Hipertensión; Diabetes; Determinantes de la salud.*

INTRODUCTION

Chronic non-communicable diseases (NCDs) are the main causes of death in the world and have generated a loss of quality of life with a high degree of limitation in work and leisure activities, overload on the health system, in addition to economic impacts for families, communities and society in general. According to the World Health Organization (WHO), it is estimated that every year 41 million people die as a result of NCDs, more than 70% of all causes of death in the world. While in Brazil, in 2016, the number of deaths caused by NCDs reached 975,400, which is equivalent to 74% of mortality that year in the country[1].

Systemic arterial hypertension (SAH) and diabetes mellitus (DM) are classified as NCDs. SAH is characterized by a sustained increase in blood pressure, measured with the appropriate technique, on at least two different occasions, in the absence of the use of antihypertensive medication. It is often associated with functional and/or structural changes in target-organs (heart, brain, kidneys and blood vessels) and metabolic disorders that increase the risk of cardiovascular events, development of cerebral vascular accident (CVA), renal failure , disability and premature death[2].

DM occurs when the pancreas does not produce enough insulin or the body cannot effectively use insulin. This is one of the priority NCDs for action by health managers. If not well controlled, it can cause blindness, kidney failure, lower limb amputation, neuropathy, microvascular and macrovascular disorders, cerebral vascular disease and several other long-term consequences that significantly impact quality of life[3].

Clinical worsening of these two diseases can contribute to higher public costs associated with increased use of health services, decreased productivity, lower quality of life, chronic complications of long-term treatment and higher mortality rates. One of the main reasons that lead to the worsening of these diseases is low therapeutic adherence. Therapeutic adherence is understood as the degree to which the patient follows the prescribed treatment, both pharmacological and non-pharmacological. This implies active responsibility shared by the patient and healthcare providers for controlling hypertension and DM[4].

Medications can be important therapeutic tools for this control. However, if used incorrectly, the treatment can also result in health risks. Furthermore, adherence to treatment also includes changing lifestyle by following guidelines on diet and physical activity habits, in addition to a multidisciplinary approach as a tool for reducing risk factors for complications[5].

Therefore, given the growing prevalence of hypertension and diabetes and the challenges associated with adherence to treatment, a greater understanding of the health care offered to patients is needed to optimize health outcomes and provide a basis for the development of more effective interventions in public health.

This study aims to highlight the existing problems in providing information about treatment and the disease, with the aim of understanding the determinants and conditions associated with adherence to treatment from the perspective of patients with hypertension and diabetes.

METHOD

The study proposal encompasses a qualitative descriptive approach, aiming to understand the thinking and actions of users treated in a public facility regarding their own drug and non-drug therapy, identifying possible problems that make therapeutic monitoring difficult.

The Specialized Diabetes and Hypertension Care Centers (CEADH) were created to guarantee specialized care for patients with high and very high risk hypertension and diabetes in the city of Fortaleza, Ceará. It provides services in endocrinology, cardiology, ophthalmology, nursing, nutrition, among others, according to patients' needs. They also have a stomatherapy outpatient clinic, aiming to treat pre-diabetic cases, the complexity of which cannot be resolved in Primary Care[6].

The seven Centers are located in three Primary Health Care Units (UAPS) and four Municipal Polyclinics in Fortaleza. Each serves the UAPS that are included in its territory and surrounding areas. Among these Centers, the location chosen for this study was motivated by being a unit with a large flow of users, which covers patients from forty UAPS in four different regions of the city. It has easy access due to its proximity to bus terminals and avenues, in addition to viable opening hours for carrying out the research[7].

Using convenience sampling criteria, 10 users were selected, over 18 years old, diagnosed with hypertension and/or DM and treated at CEADH. Users were approached in the CEADH waiting room and invited to participate in the research. Sampling was terminated when the data collected became repetitive and redundant, which demonstrated sample saturation. The exclusion criterion was the presence of a limitation that made adequate communication with the researcher impossible.

The semi-structured interview technique was used and a form was used to collect data. The form addressed personal, socioeconomic and clinical aspects, namely: gender; date of birth; race/color; religion; level of education; profession; family income; and type of chronic disease present. For the interview, a script was adapted from Edward et al.[8], which addressed questions about: current understanding of the disease; understanding the role of medicines; reasons for not taking medication; lifestyle changes; and professional service.

The interviews were carried out from June to August 2022, during one shift per week. They lasted an average of 15 minutes, were recorded on a digital recorder, after the consent of the interviewees, and later transcribed by the researcher.

The collected data was analyzed using the Content Analysis technique. This is a communication analysis aimed at obtaining, through systematic description procedures, indicators that allow the inference of knowledge regarding these messages. The theme was used as a recording unit, understood by Bardin[9] as "unit of meaning that is naturally freed from a text analyzed according to criteria related to theory that served as a guide to reading.

The process was divided into four stages. The first, called pre-analysis, aimed to explore the material through reading, in which the researcher allows himself to obtain impressions and the emergence of hypotheses with the support of the theoretical framework. In the second phase, the definition of provisional hypotheses about the analyzed text was established, gathering ideas to separate the themes. In the next phase, the identified themes and their markings in each transcription were determined. Finally, the categories were created, seen as the joining of a group of themes due to common characteristics[9].

Participants were informed about the main objectives of the research. Individual interviews were obtained with the consent of all individuals by signing the Free and Informed Consent Form, respecting the rules of ethics according to CNS Resolution 466/2012 of the Ministry of Health. The research was approved by the Ethics Committee and Research from the School of Public Health of Ceará (ESP/CE), through opinion number 5,445,362.

RESULTS

Among those interviewed, six were male and four were female, with an average age of 66.5 years, varying between 55 and 80 years. Five declared themselves mixed race, two as white and two as black. The majority had education up to elementary level and a family income of up to one minimum wage. Regarding marital status, seven of the interviewees stated that they were married.

All interviewees were self-declared hypertensive, and four of them also self-declared to have diabetes. The majority stated that they take their medications every day, at the prescribed time, although all stated that they have stopped taking their medications at least once, due to forgetting or missing the medication.

Regarding lifestyle changes after the diagnosis of the chronic condition, three of the interviewees did not make any type of change, while seven did. Everyone stated that they changed some eating habits and only two started to practice physical exercise as part of the treatment.

Based on reports from service users, two categories were identified: factors that maintain adherence to treatment; and barriers to providing adequate treatment. Such categories emerged as relevant for understanding therapeutic adherence.

Factors that maintain adherence to treatment

Among the ways that help users remember to take their medications, there is the perception of encouragement through visual stimuli, such as storing medications in strategic locations. According to some users, this makes it easier to remember to use it at the correct time. Assistance from family members is also an important factor, especially for older patients, where forgetfulness and reduced mobility make the therapeutic process difficult.

> *"My mother always helps him in the morning. He takes it before putting out his snack. She already sets his box aside. It's always in the same place in the house, right? And she's the one who remembers." (E3)*
>
> *"My medicine is next to the bed, every time I get up, I see it. When I go to sleep I see it." (E4)*

Prior knowledge about drug and non-drug treatment also proves to be a relevant factor in the service user's positive relationship with therapeutic resources. Some users reported that they seek to solve problems for their own motivation, such as improving their diet and abandoning harmful habits, such as drinking excessive alcohol.

> *"I didn't make many changes to my habits. But I'm a little careful with my diet, I know that a bad diet will worsen my health. I'm not saying that I don't eat some unhealthy foods, but it's from time to time." (E2)*
>
> *"I was ignorant and suffering from the situation. It's more up to me than the doctor to resolve it, because it was a drinking problem. Thank God I decided to get out of this habit." (E8)*

Practicing physical exercise and adequate nutrition linked to a feeling of well-being can contribute to the willingness to follow non-pharmacological measures. Continuous habit can facilitate the progression of treatment, depending on the level of adherence to pharmacological measures.

> *"Since I was young, I've liked riding a bike, and I feel good. Even to breathe. When I spend an hour riding my bike, then I get home and take a shower, even breathing is something else. If I don't walk in a day, I wake up feeling sick." (E1)*
>
> *"I follow a proper diet because I feel good. When I didn't have this control I felt some symptoms. I went to the doctor and he said that I had nothing, that's when I realized it was because of uncontrolled eating." (E8)*

Reports that made reference to a situation experienced by a family member regarding adherence to chronic disease treatment were common, similar to their own health condition. These cases make it possible to demonstrate the importance of knowing people in the same situation to better understand possible problems.

> *"My daughter discovered last year that she was diabetic. And the doctor advised her to diet, exercise… but she doesn't. She likes to eat fried foods and is sedentary. She thinks doctors are picking on us." (E6)*
>
> *"My nephew has this sugar disease, diabetes. So I told him that he has to take the medicine, if the doctor said it is continuous it is a danger not to take it. Then his blood pressure reached 22/9, now he's taking medication." (E10)*

Therapeutic adherence may also be linked to a condition related to the clinical picture, in order to avoid worsening of the disease, such as the possibility of surgery or the result of an exam. This demonstrates awareness of what can aggravate the disease, but without the understanding that continuous care is needed to avoid aggravating the condition. This report was common in patients with diabetes.

> *"I have a problem with my vision. It's very aggravated, and they said I'm going to have surgery, and until I control my diabetes I can't do it. So I have to do everything I can to control my diabetes." (E5)*
>
> *"When I forget to take my antihypertensive medication I feel bad all day, then I remember that it's because I didn't take the medication. Diabetes no longer has something specific to remember to take, but sometimes I take it when the exam comes up, so it doesn't get worse or increase too much." (E6)*

Barriers that make it difficult to adhere to treatment

The analysis of some interviews reveals a low understanding among users about the importance of non-pharmacological measures in the treatment of hypertension and diabetes, with the mistaken understanding that medications are sufficient to control diseases.

> *"I've had hypertension for three years now and there' s nothing else to treat it. Just the pills. As far as I know, right." (E1)*

Socioeconomic factors were reported in the difficulty of maintaining adherence to treatment, especially non-pharmacological treatment, demonstrating partial adherence to these measures and suggesting adaptation by the user according to existing financial conditions.

> *"The doctor recommended water aerobics to me, but I don't have easy financial access." (E2)*
> *"If we eat properly, us.. the poorer don't have enough food, right? But we can maintain ourselves, avoid salt, things like that." (E10)*

Forgetfulness is an important factor for low adherence, which may be linked to advanced age, lack of support from family members and lack of reminder methods, such as alarms at corresponding times.

> *"Sometimes I start doing something, then time passes and I don't take the medication. Always before breakfast, I have to have it. Sometimes I don't take it at night, but I always take it in the morning. It's more at night that I forget." (E5)*
>
> *"I'm a little forgetful, so I need help remembering." (E9)*

It was reported, among users with diabetes, the difficulty in accepting the diagnosis of diabetes, which leads to greater reluctance in treatment and consequently low adherence, largely linked to the lack of knowledge about the disease and the importance of maintaining adequate treatment.

> *"Diabetes, for me, didn't even exist. For me, I didn't have diabetes. It was harder to accept... In my mind, I didn't have diabetes, because diabetes is more cruel, because it hurts you a lot..." (E7)*

Users often reported obstacles to carrying out non-drug measures, more precisely physical exercise, related to advanced age and physical limitations. In the majority of cases, there was no medical approach that would provide any alternative measures.

> *"The doctor prescribed taking a walk. But then after this herniated disc appeared, the doctor thought it was best to stop." (E2)*
>
> *"Especially because people my age… I'm already 83. And it's difficult for a person that age to say that there's no problem." (E8)*

The quality of consultation with health professionals involved in the treatment of hypertension and diabetes can directly influence adherence. Several cases of dissatisfaction with care from medical professionals were reported, in relation to poor communication about the clinical situation and therapeutic approach. All users declared the need for closer dialogue with professionals.

> *"Since I started treating myself here, I have already seen my third doctor. The first and second always talked to me, this one didn't. When I arrive, he checks the exams I took, looks at everything and hands them to me. He is very fast. If I don't ask, he won't talk. Another time I asked 'Doctor, how are you there?' He just said 'OK.'" (E4)*
>
> *"I was seen by a doctor once, and when he asked what problems I had, he just said 'do this!. Then he didn't express himself to me in the way a person who works in the health sector would." (E8)*

When asked about pharmacological treatment, the lack of detailed explanation by professionals about possible adverse events and risks of irrational use of medications was quite common among those interviewed.

> *"They didn't say that the medication could cause anything, they just said that he had high blood pressure and he had to take it on time and that was it." (E3)*
>
> *"I spent more than 30 years taking prednisone and the doctor just said 'You can't take this pill' but didn't say why, what it was capable of doing, what I could suffer from it. So I thought 'if it was bad with him, it would be worse without him'". (E4)*

Regarding non-pharmacological measures, there are also reports of undetailed information from health professionals, especially in relation to diet. There is a lot of focus on salt intake, but there is a lack of professional guidance on other harms, such as fat intake, processed foods and alcohol intake, for example.

> *"The doctor only advised not to eat salt. Just that. The thing is salt." (E1)*
>
> *"Here and there they provide guidance, but not in every consultation, no. At the first consultation it was only after the medication, and while I was taking it, I drank alcohol." (E9)*

DISCUSSION

Managing diabetes and hypertension is complex and difficult to carry out, both from the health professional's perspective and from the patient's perspective, which often leads to inadequate levels of control. Adherence to the treatment of these diseases requires changes in routine and commitment from the patient and healthcare professional, which is why it requires several strategies for successful therapy[10].

The users interviewed in the present study, as well as in another study[11] with elderly patients with diabetes, recognized that drug and non-drug treatment are important for controlling the disease, but its management was compromised due to factors intrinsic such as age and forgetfulness; and extrinsic factors such as social support, complexity of the therapeutic regimen and quality of health care. Therefore, adherence to treatment must be approached as a multifactorial and multidimensional phenomenon[12].

One of the main factors reported that prevented adequate treatment was age-related cognitive and physical limitations. Forgetfulness was one of the most cited barriers to justify the lack of regular adherence to medications. According to a quantitative study[13] carried out in Australia, forgetfulness was responsible for around 30% of non-adherence to antidiabetic medication treatment. Despite being a common reason, many health professionals attribute non-adherence exclusively to this barrier, underestimating other underlying problems. This can lead patients to feel that professionals are not understanding their real challenges, generating a lack of trust in the treatment and in the doctor-patient relationship.

Regarding physical limitations, several interviewees referred to the impossibility of carrying out non-pharmacological measures, specifically regular physical exercise, due to advanced age. These reports are common to a study carried out in Ecuador, with elderly people from a gerontology center, in which many attribute their sedentary lifestyle to the perception of not being able to keep up with others, the worsening of illnesses and pain, the fear of injuries, among others[14].

Many of these difficulties can be diminished with a support network (family and social), as demonstrated in the study by Shahin et al.[15], in which a positive impact on medication adherence and quality of life of patients with hypertension was observed. and diabetes. Family members demonstrated support by monitoring their health, sharing information, helping in times of crisis, and encouraging care with diet, physical exercise and appropriate medication use. Furthermore, family, friends and colleagues can convey security and comfort to patients, making them feel valued and optimistic about the treatment.

Such support can also come from close people or acquaintances who are in a similar situation, that is, with a clinical condition of chronic cardiovascular disease. In the research by Eriksson and Gustafsson[16], family and friends with diabetes enabled patients to better assimilate the diagnosis, due to the absence of barriers such as stigmatization and prejudice. Support is important especially at the beginning of treatment, where uncertainties are most present.

There are resources that can help with memory and insufficient social support, such as the use of digital technologies. Researchers[17] evaluated the effect of using mobile technologies on controlling systemic blood pressure, which showed positive results in increasing therapeutic adherence with the use of smartphones, electronic websites, telephones, telemedicine, electronic applications, among others. However, it would be necessary to overcome obstacles, such as technological illiteracy, low level of education, less ability to handle technological devices, and socioeconomic factors[18]. The provision of digital training aimed at health promotion strategies could be one of the solutions to these obstacles.

In this study, there were also reports of people who believed that medications were the only way to control the disease, a statement found in other similar studies. This shows a weak understanding of the treatment itself and highlights the level of medication usage present in the population, which can be justified by the low supply of information and precise conditions by health services that are largely based on the biomedical model, which neglects health promotion[19].

Therapeutic inertia has also currently been studied as a way of justifying the difficult or lack of control of diseases such as hypertension and DM. It occurs when there is unsatisfactory clinical conduct carried out by the healthcare team, due to a lack of adequate guidance for the patient, which can cause a decrease in the user's quality of life and a loss of trust in the healthcare team. This proposes that a broader view must be adopted regarding therapeutic adherence, considering possible failures, such as the inadequacy of the drug and its dosage, adverse events, difficulty in accessing the healthcare system, resistance to treatment and the presence of comorbidities . Therefore, it is crucial that professionals adopt proactive approaches to ensure effective control of their patients' clinical conditions[20].

Furthermore, there were reports of difficulty in accepting the diagnosis among those interviewed. The literature shows that the emotional factor interferes with the assimilation of information during consultations, especially at the

beginning, creating difficulty in understanding the disease. Little knowledge, concerns about the impact of the disease on daily life and expectations can have an influence. Therefore, health professionals must consider the patient's emotional state during consultations and promote an appropriate dialogue[21].

Several factors related to lack of adherence to treatment are mainly due to a lack of communication between healthcare professionals and users, as indicated in several reports in this study. In the research by Bian et al.[19], it was concluded that factors related to the approach to dialogue and the level of trust in the professional can have a profound impact on adherence to treatment. In large part, unsatisfactory health care was due to insufficient time to welcome patients and offer guidance on medications, diet and physical exercise, resulting in quick and unhelpful consultations. In the context of public health, this failure may be linked to infrastructure problems and organization of the flow of care in health units.

One of the consequences of poor communication between professional and user and the low level of trust involved is false adherence to medications, reported in two interviews in this study, with improvement in adherence only before consultations and exams, for example. This masks the real therapeutic situation, creating a false impression of control and making clinical practice difficult. Several factors can interfere with this issue, such as the lack of patient involvement in the decision-making process and the lack of open and empathetic communication[22].

With regard to the relationship between healthcare professionals and patients, in another study carried out in Fortaleza, around a third of the hypertensive users interviewed responded that they always discussed how to comply with the treatment, an amount lower than expected. This reinforces the understanding that it is necessary to strengthen the patient's autonomy and protagonism in their own therapeutic process[23].

One of the main strategies for developing user autonomy and protagonism is through health education projects focused on self-management, which includes the ability to build disease control skills. This can improve the ability to seek evidence-based information about medications, monitor physiological parameters, adjust diet, and regulate physical activity. The study by Foroumandi et al.[24] showed that educational self-management interventions, using varied methods such as focus group discussions and workshops, significantly increased the self-efficiency of hypertensive patients.

As for professional care, patients' demand for longer medical consultations, in which the clinical situation can be addressed in an expanded, clear and objective way, is very present in this study. This does not necessarily demonstrate an individual failure on the part of the professional, but an example that the role of the healthcare team in treating illnesses is still historically centered and held responsible by the doctor.

For this reason, care involving an interdisciplinary team, with nurses, pharmacists, nutritionists, psychologists, social workers, physical educators, among others, aims to avoid problems commonly present in health services aimed at patients with hypertension and diabetes. These professionals can fill gaps caused by the short duration of medical consultations, having the opportunity to carry out complete reviews on drug and non-drug therapies, evaluating their level of adherence[25].

In a study carried out in Canada, the active role of pharmaceutical professionals contributed to the reduction of the complexity of the medication regimen, with regard to pharmaceutical interventions and recommendations regarding medical prescriptions and possible problems related to medications, mainly related to polypharmacy([26]). According to researchers from the Oswaldo Cruz Foundation in Brasília[27], significant results for treatment adherence can be achieved by strategies such as carrying out a pharmaceutical care program, combined actions to manage medication use and follow-up sessions.

Regarding healthy eating, the professional nutritionist has the duty to understand the multiplicity of factors determining a patient's food consumption, such as biological, economic and social factors. A detailed and objective service, understanding the particularities of each person and clearly explaining the importance of a balanced eating habit, is essential, in order to improve clinical parameters and promote well-being and quality of life[28].

Regarding physical exercise, the literature highlights a sedentary lifestyle as one of the main risk factors for cardiovascular diseases and their worsening. In a study carried out with hypertensive patients in Rio de Janeiro, a sedentary lifestyle was identified in more than 50% of participants([20]). In another similar study, carried out in Rio Grande do Sul, among 40 patients with diabetes interviewed, only eight practiced any physical activity[10].

In the present study, the majority of sedentary interviewees mentioned physical limitations. The presence of a Physical Education professional with the team can help assess these limitations and recommend exercises adapted for each condition. In a study carried out by the Institute of Physical Education and Sport at the Federal University of Alagoas, a physical exercise protocol aimed at elderly people was developed, capable of improving cardiorespiratory resistance, muscular strength, balance, self-esteem, socialization and reducing stress[29].

Thus, it is understood that the presence of several professionals is essential for the care, control and adequate monitoring of diabetes and hypertension. CEADH has a diverse multidisciplinary team focused on the care of its users, however, there is still a need to strengthen integration, focusing on interdisciplinarity to meet needs and coordinate care more effectively, ensuring that each aspect of treatment is addressed in an appropriate manner.[12].

Finally, it is worth highlighting that the limitation of this research was that participants were in only one scenario. Thus, the complexity of experiences and sociocultural contexts may have been portrayed in a partial way.

FINAL CONSIDERATIONS

Improving the multiple components of healthcare for patients with hypertension and diabetes, such as those demonstrated in this study, can improve these patients' adherence to treatment and, consequently, improve clinical health outcomes. Positive advances in the therapeutic process can be a source of motivation for users of these services to maintain self-care, which reduces the risk of worsening these diseases and promotes quality of life.

The data obtained emphasize the need to strengthen interdisciplinary health care, improving the effectiveness and efficiency of care in the clinical monitoring of this population, so that establishments that offer CEADH services can develop strategies based on knowledge of their weaknesses and potentialities.

It is necessary to have the support of new studies involving the service, considering other health establishments and the perception of other agents involved, such as health professionals and managers. Group activities with the presence of users, professionals and family members or companions are examples of strategies that can promote social interaction, build relationships and strengthen confidence in treatment, enhancing the encouragement of self-care.

INTEREST CONFLICTS

There was no type of conflict of interest with the participants or any other collaborator, direct or indirect, for the development of this research.

CONTRIBUTIONS

Marinara Fonseca Freire contributed to the preparation, study design, data collection, analysis, interpretation and writing of the manuscript, and **Cibelly Melo Ferreira** contributed to the study design, writing and review of the manuscript.

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REFERENCES

1. World Health Organization. Noncommunicable diseases: progress monitor 2020. [Local desconhecido]: WHO; 2020 [acesso em 2021 set 30]. Disponível em: https://www.who.int/publications-detail/ncd-progress-monitor-2020.
2. Barroso WKS, Rodrigues CIS, Bortolotto LA, Mota-Gomes MA, Brandão AA, Feitosa ADM, et al. Diretrizes Brasileiras de Hipertensão Arterial 2020. Arq Bras Cardiol [internet]. 2021 [acesso em 2023 ja 09]. Disponível em: https://abccardiol.org/article/diretrizes-brasileiras-de-hipertensao-arterial-2020/
3. Sociedade Brasileira de Diabetes. Diretrizes da Sociedade Brasileira de Diabetes 2019-2020. São Paulo: Editora Clannad; 2019.
4. Sartori AC, Lucena TFR, Lopes CT, Bernuci MP, Yamaguchi MU. Educational Intervention Using WhatsApp on Medication Adherence in Hypertension and Diabetes Patients: A Randomized Clinical Trial. Telemed J E Health. 2020; 26(12):1526–32.
5. Carvalho AN. A Importância da Redução dos Fatores de Risco para Complicações da Hipertensão e do Diabetes na Qualidade de Vida de Usuário da Unidade de Saúde Candidés, em Divinópolis [Trabalho de Conclusão de Curso]. Belo Horizonte: Universidade Federal de Minas Gerais; 2018.

6. Prefeitura Municipal de Fortaleza. Centro Especializado de Atenção ao Diabético e Hipertenso - CEADH. Canal Saúde. 2021[acesso em 2021 set 30]. Disponível em: https://saude.fortaleza.ce.gov.br/ceadh.
7. Prefeitura Municipal de Fortaleza. Policlínicas. Canal Saúde. 2021 [acesso em 2021 set 30]. Disponível em: https://saude.fortaleza.ce.gov.br/policlinicas.
8. Edward A, Campbell B, Manase F, Appel LJ. Patient and healthcare provider perspectives on adherence with antihypertensive medications: an exploratory qualitative study in Tanzania. BMC Health Services Research. 2021;21(1).
9. Bardin L. Análise de conteúdo. Lisboa: Edições 70; 2010.
10. Wtodarski L, Fernandes DA, Brandalise M. Avaliação do autocuidado na adesão do tratamento em pacientes usuários de insulinas. Aletheia. 2020;53(1):121–32.
11. Oliveira CJ, José HM. Pessoa idosa com diabetes mellitus tipo 2: Contributos para a compreensão da gestão do regime medicamentoso. Revista de Enfermagem Referência [internet]. 2022 [acesso em 2024 mai 10]; serVI(1 Suppl 1): e21029. Disponível em: https://pesquisa.bvsalud.org/portal/resource/pt/biblio-1387129
12. Miranda PRO, Sacramento DDO, Diaz FBBS, Toledo LV, Pereira RSF, Alves KR. Percepção de pessoas com hipertensão arterial sobre aspectos que influenciam a adesão ao tratamento. Revista de Enfermagem da UFSM [internet]. 2021 [acesso 2024 maio 01];11:1-22. Disponível em: https://periodicos.ufsm.br/reufsm/article/view/42403/pdf
13. Aminde LN, Tindong M, Ngwasiri CA, Aminde JA, Njim T, Fondong AA, et al. Adherence to antidiabetic medication and factors associated with non-adherence among patients with type-2 diabetes mellitus in two regional hospitals in Cameroon. BMC Endocrine Disorders. 2019;19(1):35.
14. Catute VJV, Alejandro FAC. Motivación hacia la práctica de actividades físicas en asistentes del centro gerontológico las Piñas del Cantón Milagro. PODIUM - Revista de Ciencia y Tecnología en la Cultura Física. 2022;17(3):961–73.
15. Shahin W, Kennedy GA, Stupans I. The association between social support and medication adherence in patients with hypertension: A systematic review. Pharmacy Practice. 2021;19(2):2300.
16. Eriksson S, Gustafsson LK. Gaining reconciliation when living with insulin treated diabetes: a qualitative study using content analysis. International Journal of Qualitative Studies on Health and Well-being [internet]. 2022 [acesso em 2024 maio 1];17(1):2090659. Disponível em: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC9225693/
17. Almasi S, Hosseini A, Emami H, Sabahi A. Mobile Health Technology for Hypertension Management: A Systematic Review. Acta Med Iran. 2020;58(6):249–259.
18. Silva LALB, Melo RC, Araújo BC, Luquine CD Júnior, Milhomens LM, Bortoli MC, et al. Barreiras e facilitadores na APS para adesão ao tratamento em adultos com hipertensão arterial ou diabetes mellitus tipo 2. Fiocruz. 2021; 23–3.
19. Bian W, Wang Z, Wan J, Zhang F, Wu X, Li X, et al. Exploring challenges to nutrition intervention adherence using COM-B model among patients with wet age-related macular degeneration: a qualitative study. BMJ Open [internet]. 2022 [2024 mai 1];12(11):e064892. Disponível em: https://pubmed.ncbi.nlm.nih.gov/36446464/.
20. Silva ACM, Mello SS, Vital PC, Araujo IA, Soares RS, Oliveira SV Júnior, et al. Controle Pressórico e Inércia Terapêutica no Ambulatório Escola da Universidade Iguaçu. Revista Brasileira de Hipertensão. 2020;27(2):59–63.
21. Hashim MJ. The art of diabetes care: guidelines for a holistic approach to human and social factors. Journal of Yeungnam Medical Science. 2022;40(2):218–222.
22. Hamrahian SM, Maarouf OH, Fülöp T. A Critical Review of Medication Adherence in Hypertension: Barriers and Facilitators Clinicians Should Consider. Patient Prefer Adherence. 2022;16:2749–57.
23. Silva GF, Magalhães FSP, Silva RV, Moreira TMM. Adesão ao tratamento anti-hipertensivo e ocorrência de Síndrome Metabólica. Escola Anna Nery [internet]. 2021 [acesso em 2024 maio 1];25(2):e20200213. DOI: 10.1590/2177-9465-EAN-2020-0213.

24. Foroumandi E, Kheirouri S, Alizadeh M. The potency of education programs for management of blood pressure through increasing self-efficacy of hypertensive patients: A systematic review and meta-analysis. Patient Education and Counseling. 2020;103(3):451–61.

25. Yoon J, Wu F, Chang E. Impact of Primary Care Intensive Management on Medication Adherence and Adjustments. The American Journal of Managed Care [internet]. 2020 [acesso em 2024 maio 1];26(8):e239–e245. Disponível em: https://pubmed.ncbi.nlm.nih.gov/32835465/.

26. Abdin SM, Grenier-Gosselin L, Guénette L. Impact of pharmacists' interventions on the pharmacotherapy of patients with complex needs monitored in multidisciplinary primary care teams. International Journal of Pharmacy Practice. 2019;28(1):75–83.

27. Silva LALB, Melo RC, Araújo BC, Luquine CD Júnior, Milhomens LM, Bortoli MC, et al. Estratégias de adesão ao tratamento de longo prazo para pessoas adultas com hipertensão arterial na Atenção Primária à Saúde (APS). Fiocruz. 2020;23–3.

28. Bricarello LP, Retondario A, Poltronieri F, Souza AM, Vasconcelos FAG. Abordagem dietética para controle da hipertensão: reflexões sobre adesão e possíveis impactos para a saúde coletiva. Ciência & Saúde Coletiva. 2020;25(4):1421–32.

29. Cassiano AN, Silva TS, Nascimento CQ, Wanderley EM, Prado ES, Santos TMM, et al. Efeitos do exercício físico sobre o risco cardiovascular e qualidade de vida em idosos hipertensos. Ciência & Saúde Coletiva. 2020;25(6):2203–12.

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