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Self-care of older adults with diabetes *mellitus* from the perspective of the chronic care model

Autocuidado de idosos com diabetes mellitus na perspectiva do modelo de atenção às condições crônicas

Autocuidado de ancianos con diabetes mellitus desde la perspectiva del modelo de atención de condiciones crónicas

ABSTRACT

Objective: To know the self-care practices of older adults with diabetes *mellitus* type 2. **Method:** This is a qualitative study using the Chronic Care Model as a conceptual basis, in which 12 older adults with diabetes participated. Individual interviews and focus groups were conducted for data collection. Bardin's content analysis was used. **Results:** The older adults know the damage of not monitoring the disease; adequate diet is a concern; many know about foot care; the nurse was responsible for health education. **Conclusion:** There are still gaps in the knowledge of the older adults with diabetes that impairs self-care from the perspective of the Chronic Care Model. However, the nurse is a professional reference to support educational practices for this population.
Descriptors: Diabetes *mellitus*; Self Care; Aged; Primary Health Care; Nursing.

RESUMO

Objetivo: Conhecer as práticas de autocuidado de idosos com diabetes *mellitus* tipo 2. **Método:** Estudo qualitativo, que utilizou como base conceitual o Modelo de Atenção às Condições Crônicas, que contou com a participação de 12 idosos com diabetes. Utilizou-se, para a coleta de dados, entrevista individual e grupo focal. Foi utilizada a análise de conteúdo de Bardin. **Resultados:** Os idosos conhecem os desfechos da doença não controlada; a alimentação adequada é uma preocupação; muitos conheciam os cuidados com os pés; o enfermeiro foi responsável pela educação em saúde. **Conclusão:** Ainda existem lacunas no conhecimento dos idosos com diabetes que repercutem no autocuidado na perspectiva do Modelo de Atenção às Condições Crônicas. Entretanto o enfermeiro é um profissional de referência para o apoio às práticas educacionais à essa população.
Descritores: Diabetes *mellitus;* Autocuidado. Idoso; Atenção Primária à Saúde; Enfermagem.

RESUMEN

Objetivo: Conocer las prácticas de autocuidado de las personas ancianas con diabetes *mellitus* tipo 2. **Método:** Estudio cualitativo, que utilizó como base conceptual el Modelo de Atención de Condiciones Crónicas, el cual contó con la participación de 12 ancianos diabéticos. Se utilizaron entrevistas individuales y de grupos focales para la recolección de datos. Se utilizó el análisis de contenido de Bardin. **Resultados:** Los ancianos conocen los resultados de la enfermedad no controlada; existe también preocupación por una nutrición adecuada; muchos sabían sobre el cuidado de los pies; la enfermera era responsable de la educación para la salud. **Conclusión:** Aún existen lagunas en el conocimiento de los ancianos con diabetes que afectan el autocuidado desde la perspectiva del Modelo de Atención de Condiciones Crónicas. Sin embargo, la enfermera es una profesional de referencia para el apoyo de las prácticas educativas de esta población.
Descriptores: Diabetes *mellitus*; Autocuidado; Anciano; Atención Primaria de Salud; Enfermería.

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INTRODUCTION

Diabetes *mellitus* (DM) is a chronic condition with high morbidity, considered an epidemic that affects more than 463 million people worldwide, and is associated with an increased risk of developing acute and chronic complications[1]. Type 2 DM (T2DM) is accountable for 90% of all cases of the disease, affecting nearly 425 million people worldwide[2].

The increase in life expectancy, when combined with risk factors, makes T2DM have a higher incidence in the older adult population, involving a higher risk of premature death associated with frailties and geriatric syndromes[2-3].

Constant hyperglycemia, over time, causes micro and macrovascular damage, such as retinopathy, nephropathy, coronary disease, cerebrovascular disease, peripheral arterial disease, and peripheral neuropathy[1-2]. Given the different chances of complications, older adults with T2DM must change their lifestyle, with adherence to drug treatment, healthy eating and regular physical activity, minimum requirements to keep a good metabolic control[4].

For guidance on changes in habits and support for the daily practice of self-care for the older adult with T2DM, the role of health professionals is emphasized, in promoting educational activities, aimed at the empowerment of people with this chronic condition, to be able to manage their own health determinants[3,5].

Health education is a key strategy to encourage self-care, as it improves awareness of the disease and makes those involved protagonists of care, in addition to guiding them, so that they independently make changes in lifestyle habits, contributing to the maintenance of their well-being[6]. Educational actions focused on the person's role in the face of their chronic condition are coherent and underline the principles of the Chronic Care Model (CCM), whose self-management strategies involve self-care supported by health professionals[3,5,7].

Supported self-care aims to use a new approach to health education for people with chronic conditions, with the use of light technologies, based on bonding and embracing relationships, which propose the co-participation of subjects in the establishment of care goals[7]. Atenção Primária à Saúde (APS) (Primary Health Care), which works as a gateway for the population and is linked to other levels of health care, consolidates the joint construction of self-care practices with health promotion initiatives for people with T2DM, prevention of grievances, recovery, and rehabilitation of existing complications[7-8].

The reorganization of care practices, in health services, for care using supported self-care, as proposed by the CCM, is gradually implemented. However, some care services for people with T2DM still reflect a curative model, without commitment to iatrogenic behavior, promoting assistance based on the complaint, unnecessary referrals that, consequently, contribute to the worsening of the chronic complications of the disease[9].

It is important that care for people affected by T2DM is planned, considering health determinants and conditions, as well as individual and family needs, supporting the principles of APS, with the current health model, ensuring effective, accessible, and long-term care, respecting the political-administrative hierarchy and decentralization of services[8].

Considering the monitoring of people with T2DM in APS, according to the CCM, the actions of health professionals must be systematized and directed to the prevention, identification, and management of chronic complications, conducted by a team capable of coping with these complex occurrences[9].

Although self-care practices are essential to positively impact the quality of life of older adults with T2DM and the health-disease process, the large number of studies describing the epidemiology of T2DM and the little consideration given to its complications and need for self-care[10] is emphasized. Moreover, studies[4,9,11-12] showed gaps in self-care practices to manage T2DM, pointing to the need for research to support health professionals to improve their educational actions and interventions.

In this sense, the relevance of this study lies in the importance of investigating the self-care practices of older adults diagnosed with T2DM who participate in individual or group educational activities in APS. The results will contribute to the strengthening of health promotion, with a focus on self-care and disease prevention for older adults with T2DM, enabling the improvement of educational strategies carried out by health professionals. Also, it will help to encourage the use of elements that make up the CCM in the care of people with chronic conditions in APS.

Given these considerations, the following research question emerged: How do older adults with T2DM recognize self-care practices? Thus, this study aimed to understand the self-care practices of older adults with type 2 diabetes *mellitus*.

METHOD

This is a descriptive, exploratory study of a qualitative type, which used the Chronic Care Model [7]. The setting was a Unidade Básica de Saúde (UBS) (Basic Health Unit), located in the southern region of the country, selected because it stands out in the regional mentoring process for the bronze seal.

The study population consisted of older adults diagnosed with T2DM assisted at the UBS. People who met the following eligibility criteria were included in the study: age 60 years or older, having a diagnosis of T2DM, classified as low, moderate, or high risk, attending individual and/or group offered by the APS and participate in the focus group. Exclusion criteria were having physical or psychological conditions that made it impossible to participate in data collection. Participants were randomly selected as they attended the UBS.

Data collection was carried out from October to November 2019, through individual interviews and a focus group. The choice of the Focus Group was because of the possibility of enabling dialogue, interaction, and exchange of experiences among the participants, which are key elements to understand the self-care practices experienced by the group's participants. Two encounters were scheduled for the performance of individual interviews and, subsequently, the focus group, with six older adults participating in each encounter, meeting the rigor criteria of this methodological technique[13]. Data collection was conducted by two nursing researchers, graduate students with experience in the techniques employed, one affiliated to the UBS, which facilitated the approximation with the participants and the establishment of a fruitful dialogue during the focus groups.

Initially, the importance and reasons for participating in the research were clarified and indivi-dual interviews were carried out, based on a semi-structured questionnaire that approached social and clinical aspects (sex; age; time since diagnosis; polypharmacy; evaluation of feet and metabolic control classification), with an average duration of 15 minutes. Afterward, the participants gathered in a semicircle, for the beginning of the focus group, in which the researchers were the moderators and observers[13], with the researcher linked to the UBS taking over the role of observer to reduce conflicts of interest. The duration of the focus groups was approximately 70 minutes, and the content was audio-recorded.

The guiding question of the focus groups was: How do you perform self-care to control diabetes and prevent complications? And, as a result, questions about the changes in habits, physical activity, healthy eating, foot care were asked. Also, which health professional was responsible for the guidance and support for self-care.

All interviews and audio-recorded content obtained in the focus groups were transcribed in full and organized in a Microsoft Word document. Then, they were submitted to content analysis[14], following the steps of pre-analysis, material exploration, data processing, and inference of results. In the pre-analysis, a floating reading was performed to find initial impressions about the material to be analyzed. Afterward, exhaustive readings of the material were made to explore the data obtained. Afterward, the messages were coded and then the nucleus of meaning was apprehended, grouping them by similarities in thematic categories.

The analysis allowed the elaboration of four thematic categories: the first one was composed of codes related to the knowledge about the main complications of T2DM, in which participants revealed that the knowledge learned was a stimulus for a desire to or self-care. The most predominant codes related to self-care practices comprised the second and third categories. And, finally, other codes revealed the professional who serves as the main responsible for supporting self-care of people with T2DM, establishing the last category of study.

The research was approved by the Permanent Committee for the Assessment of Projects and the Permanent Committee for Ethics in Research with Human Beings (COPEP), according to an opinion no. 3.760.510, under Resolutions 466/2012 and 510/2016 of the National Health Council on investigations with human beings. All participants signed the Informed Consent Form (ICF) and to preserve secrecy and anonymity, the letter "P" was used for identification, meaning participant, followed by numbers from 1 to 12, to classify the order of the lines, for example, P1, P2... to P12.

The Consolidated Criteria for Reporting Qualitative Research (COREQ) was used to guide the development of the study.

RESULTS AND DISCUSSION

A total of 12 older adults with T2DM participated in the study, aged between 60 and 79 years, eight women, seven older adults with up to five years of diagnosis of the disease, six using polypharmacy, with daily use of five or more medications; six never underwent foot examination by health professionals; six whose foot examination did not show risks and seven with poor metabolic control classification. Poor metabolic control represents glycated hemoglobin ≥ 9% or ≥ 7% in the presence of chronic complications[2], suggesting a greater need for professional monitoring of existing complications and prevention of the appearance or worsening of other complications.

In the reports, several aspects that interfered with health care were found, which were organized into the following categories: Knowledge about complications caused by T2DM; Self-care practices concerning health habits; Self-care practices concerning the feet and Professional responsible for health education.

Knowledge about complications caused by T2DM

This category addresses the participants' prior knowledge about the possible complications of T2DM. When questioning the participants about self-care practices, they revealed to practice them to keep the disease steady and prevent complications. The findings showed that the older adults know the outcomes of the uncontrolled disease, which suggested successful educational interventions carried out by the local health team within the scope of knowledge of complications.

"My brother went blind because of diabetes, so I'm afraid" (P3). "When it damages the kidneys, then there is nothing else to do" (P4). "Diabetes makes you amputate parts of the body" (P6). "Those who have complications are those who have poorly managed diabetes" (P7).

For the participants, understanding the T2DM complications was an important element so that self-care practices were adopted. Micro and macrovascular complications, such as ophthalmological, sensitivity, and renal changes, and amputation were also mentioned in another study with people with T2DM[5]. It is important that health professionals working in APS be aware of all possible chronic complications of T2DM, with the adoption of proactive and multidisciplinary interventions necessary to prevent these complications[9].

Professional management, for the prevention of complications, needs to consider individual behavioral aspects and the individual's understanding of the natural course of the disease. Interventions, when associated with behavioral and psychosocial domains, favor the development of care plans that address the real health needs of these people, promoting a better quality of life[15].

The prevention of T2DM and its complications is a public health priority nowadays and needs new strategies to face these obstacles. With proper monitoring of people in APS, levels of prevention should guide this practice. In primary prevention, counseling aims to abolish risk factors and prevent disease onset; secondary prevention monitors people diagnosed with T2DM to prevent acute or chronic complications; and, tertiary prevention aims at the rehabilitation or limitation of the impairments caused by the complications[2,16]. There is also the concept of quaternary prevention, first mentioned by a family doctor in Belgium, which consists of reducing unnecessary medicalization and interventionism, preventing iatrogenic damage, presenting itself as a need for application in APS[17].

Adequate screening of people with chronic conditions in APS, according to the CCM, aims to focus on health processes, to reduce the incidence of unnecessary interventions (iatrogenic), based on professional conduct established by protocols and clinical guidelines[7].

Promoting the education of people with chronic conditions to change behavior with support for self-care[7] is one of the main investments in public health, since the better the knowledge acquired, the greater the improvement documented in the practice of self-care[16]. Working on the prevention of chronic complications of T2DM requires the involvement of the person and the support of their family, social network, health professionals, managers, health services, health system, at all levels of care and beneficial and applicable public policies so that satisfactory results can be achieved for the lives of those who live with this disease[9].

Informing people with T2DM that they have a chronic condition, which cannot be cured, but rather controlled helps in understanding and

adhering to lifestyle changes to prevent the progression of the disease and the occurrence of complications[18]. Therefore, the monitoring of chronic conditions in APS must be supported by tertiary and quaternary prevention strategies, to reduce complications and their impacts on quality of life and the arbitrary use of medications[19].

It is worth noting that satisfactory knowledge about the complications caused by T2DM is not the same as having coping attitudes to prevent its onset. A study[4] carried out with APS users with T2DM found that, although almost half of the participants had satisfactory knowledge about diabetes, 98% had negative attitudes towards coping with the disease.

For this reason, professional behavior following the CCM includes guidance actions, regarding the acknowledgment of the complications of the disease and support for adherence to good health practices, carrying out care plans with individualized goals in agreement with the people served. Therefore, following the proposed treatment, participating in the conduct of treatment with goal definitions and support for problem-solving increase people's confidence and ability to manage their health determinants, indicating co-responsibility between the person and the health team for the results reached[20].

Self-care practices concerning health habits

This category comprised the general care for the control of T2DM. Aspects related to modifiable risk factors emerged, such as inadequate diet, smoking, and sedentary lifestyle. All these aspects were highlighted by the participants when provoked to comment on care related to health habits.

"Not smoking, not eating too many sweets, not drinking soda" (P1). "Avoid sugar, salt, and fatty meat" (P8). "Not eating a lot of bread and sweet crackers" (P2). "Avoiding the sugar and white flower" (P12). "I participated in the smoking group and managed to reduce the number of cigarettes I smoke" (P4). "You have to go for a walk. I go for a walk with my husband from Monday to Friday" (P5).

In both groups, the first comments were related to diet, showing that proper diet is a major concern of older adults with T2DM. However, it is noteworthy that, often, the concern for changing habits begins after receiving the diagnosis of the disease. A healthy lifestyle, with an adequate diet and physical activity, should be part of the therapeutic guidance of health professionals for all people. In fact, in some cases, adequate glycemic control can only be achieved with lifestyle changes, without the need for drug therapy[1-2].

It is recommended that people with T2DM and their families participate in nutritional education programs since the detection of the disease, with a discussion on the importance of self-care, making the individual independent and empowered to make decisions related to food and metabolic control[21].

The most developed nursing interventions with people with T2DM and arterial hypertension (AH) are related to education, regarding disease control with changes in lifestyle habits, such as, for example, nutritional counseling, encouraging adherence to physical activity, smoking cessation, and guidelines for drug therapy, encouraging the person's active participation in the development of their care plan, during the nursing consultation, highlighting their co-responsibility for the achievement of the required results[15].

As for smoking, there is an acknowledgment by the participants about the harmful effects of tobacco for the worsening of their chronic condition, including a person's report on the participation in the smoking group in APS. There is a consensus in the literature that smoking by people with T2DM negatively influences the control of the disease. It is estimated that smoking, an important modifiable risk factor for the development of T2DM, is directly related to 10% of all cases of T2DM[2].

In this sense, the strategies used by health professionals, while restating the benefits of smoking cessation, to avoid complications in people with T2DM, also need to be provided with an embracing attitude to support and motivate these people at times of abstinence[22].

The practice of physical activity, also mentioned by the participants, involves non-drug treatment, as well as diet. Both care practices are a consensus in the literature as necessary for metabolic control[1-2]. A study carried out with people with AH and T2DM attended, as recommended by the CCM, in the Southwest region of Paraná, found that almost 60% of them did not practice physical activity regularly[11]. Another study also carried out with older adults, mostly female, reported that, since women spend many hours in domestic chores, the time for physical activities was insufficient[23].

Aging, associated with decreased physical activity, promotes the accumulation of visceral fat, which promotes the increase in insulin resistance[2]. Thus, regular physical activity has a beneficial effect in several aspects: improving cardiorespiratory capacity, body composition (decrease in fat mass and increase in lean mass), bone mass, and insulin sensitivity, besides promoting psychosocial well-being[2]. Thus, encouraging the regular practice of physical activity among older adults aims to reduce the incidence of morbidities related to senility and disabling geriatric syndromes[23] with a care plan developed cooperatively between the APS team, specialized care, user, and family[7].

Non-pharmacological treatment for T2DM, in particular, the change in eating habits, leads to significant psychological distress for the person, which often affects their self-esteem[16]. This situation could be apprehended in the following reports:

"People with diabetes cannot eat anything"(P2). "I can only look at food, I can't eat" (P9). "It takes away the pleasure of eating" (P11). "They [health professionals] said that I can't eat sweets, but I eat them" (P12).

When people with T2DM do not follow the treatment, they believe that the actions of health professionals are real barriers because they do not meet their wishes[5]. One of the CCM's strategies is to use tools to show the key role of the person with a chronic condition, encouraging active participation in learning and managing their health condition[3,5,7]. Once empowered, this person has the potential to contribute to the improvement of their psychological and clinical results, as adherence to self-care practices increases their autonomy in terms of their ability to take care of their own health[3,16].

According to the CCM, the involvement of people with chronic conditions in their care process is necessary, as this is a central and innovative strategy in care, given that the person with a chronic condition needs to learn to deal with this condition daily, using practices of self-care for life[20].

For people with T2DM to be involved in the care process, health professionals must have the ability to establish diagnoses that cover biological, cultural, social, economic, and psychological aspects. The diagnosis of chronic diseases, such as T2DM, changes most people's lives and can lead to feelings of anguish and hopelessness, given the perception of little control over one's life, which reduces the ability to take action and think[2].

One of the ways to better understand the times of change of a person with a chronic condition is to use the Transtheoretical Model of Behavior Change, which defines five stages of change experienced by the person, when changing their behavior: Pre-contemplation: when the person is not aware of a certain problem or does not give it due importance to begin changing habits; Contemplation: the person identifies the problem, but is not yet able to face the change; Preparation: moment of determination for the change process, with the definition of strategies for behavior modification; Action: it is the stage in which the change in the behavior happens and Maintenance: time of greater effort to prevent lapses or relapses that lead the person to return to the old behavior[2,7].

Understanding the stages of the behavior of a person with a chronic condition is important to the health education process, since changing behavior and adherence to self-care practices depend on their motivation to change lifestyle habits. When education is combined with behavior change, conditions may be created to promote the desired transformation. The care for people with chronic conditions, according to the CCM, recommends the use of the Transtheoretical Model, to assess the stage in which the person is and thus, develop adequate educational activities aiming at a successful intervention[7].

In this way, health professionals and the person assisted become subjects of the transformation process, who will learn from the experiences of both, making the process natural and possible of promoting changes[2,7].

Self-care practices concerning the feet

Foot self-care is a very important practice to be considered when treating people with T2DM, as it is part of a daily routine that significantly contributes to avoiding future complications[4]. In this category, it was possible to observe a large discrepancy of information regarding appropriate self-care practices, as half of the participants reported attending the nursing consultation with an assessment of the feet and the other half did not receive this assistance, which directly impacted the way they performed daily care.

"Dry well between your toes so you don't get a fungus" (P3). "Wear closed-toe shoes, which I've changed since I was guided. I used to wear

slippers" (P1). "I used to wear flip-flops to the health unit and the nurse already told me that I wasn't supposed to wear this type of shoes" (P6). "You can't remove the cuticle" (P4). "I've seen people with wounds because their foot was cracked" (P3). "You can't cut the callus, we who have diabetes if you cut the callus, the foot will fall out" (P12). "I put on foot lotion at bedtime" (P11). "You cannot put lotion on the middle of your toes and you have to dry very well" (P9). "No one ever said anything to me... I feel hot [in my feet], I thought it was menopause" (P10). "When my foot is really cracked, I rub it on the floor" (P8).

The concern of some older adults about the risk of amputation was reflected in their prior knowledge about the poor prognosis of ulcerations. People with T2DM with ulcerations in the lower limbs and peripheral arterial disease may have survival of fewer than five years, that is, a prognosis as bad as an oncological disease[1-2].

The search for more information about complications related to lack of foot care was also found in another study[24], based on the demand of users themselves, in thematic meetings with health professionals about foot care for people with T2DM.

Peripheral neuropathy leads to loss of sensitivity, being one of the most important risk factors for the development of ulcers, the main cause of lower-limb amputations in people with T2DM[1-2,12]. Persistent hyperglycemia due to poor glycemic control is a risk factor for peripheral neuropathy[1-2].

Thus, it is recommended to inspect the feet annually to detect signs or symptoms of loss of protective sensitivity and peripheral arterial disease, based on history and pulse palpation, even in people with T2DM without active ulcers[2]. Among the care recommendations, people with T2DM should not walk barefoot, wear shoes without socks or thin-soled slippers, whether indoors or outdoors, should inspect their feet and the interior of shoes daily, wash their feet daily and dry well between the toes, use emollients to lubricate dry skin and avoid chemical agents or any other technique to remove calluses or hyperkeratosis[2].

People with T2DM who had their feet periodically inspected showed greater survival because they adopted self-care measures, such as hygiene habits and proper shoes to prevent risks[12]. These findings show the need to improve access to educational activities for the entire population with T2DM, promote suitable guidance, and employ supported self-care to prevent complications[24]. Thus, the physical examination of the feet becomes crucial for every person with T2DM[1-2,12].

Working with health education for foot care is essential to change habits that are incompatible with good health practices. The results showed that people who did not have their feet inspected and did not receive guidance on this care were less aware of foot self-care than others who were guided, which reinforces the importance of promoting health education for people with T2DM to the self-care with the feet.

In this sense, educational actions can be worked on, in operational groups, workshops, shared attention in groups, considering psychosocial and cultural aspects that influence the learning context [7,21]. Educational interventions for self-care of people with T2DM increased the level of knowledge of these people about the disease, compared to those who did not participate, representing the effectiveness of these actions[21].

According to the CCM, educational actions need to be guided by qualified listening, the exchange of experiences and dialogue, building an environment in which the user can express doubts, feelings, and complaints, to promote self-reflection and self-assessment of people regarding behaviors that changed throughout the educational practice due to the achievement of the proposed goals[24].

Similar to the results found in another study[9], there is still difficulty in the health care of people with T2DM in APS, evidencing gaps in the implementation of what was proposed by the CCM on the screening of chronic complications.

Professional responsible for health education

Health education for people with T2DM in APS comprises a mutual relationship between health professionals and the person with this condition, in which both jointly build the care plan, whose role of the professional is to prepare them to participate in their treatment proactively. It is understood that this relationship between professional-user plays a key role in educational reinforcement about self-care practices. The category underlines the professional who most performs health education for older adults with T2DM and supports self-care so that the person can manage their health determinants.

"She [the nurse] evaluated [the feet] and then explained everything to me... even how to cut the toenails" (P11). "She [the nurse] explained to me that my glycated blood glucose to be good had to be below 7" (P3). "She [the nurse] told me that I need to eat every three hours, or my diabetes will drop" (P7). "I learned how to do the finger test, she [the nurse] gave me the device, taught me how to use it and write down the results to take on the consultation day" (P8).

The participants' consensus in referring to the nurse as the professional responsible for health education is highlighted, which allowed them to learn about self-care practices. This result highlights the role of nurses when there is a change in the health care model, which seeks to break the hegemony of the biomedical model. The link between the person assisted and the health professional is vital to the process of creating knowledge, with a positive impact on self-care measures[6].

The APS nurse is the professional who has the greatest contact and knowledge of the health conditions of its population, therefore, relationships of trust with users are commonly established over time, allowing people to express feelings and difficulties[25]. When the nurse is effectively trained, it becomes easier to carry out nursing diagnoses and, with the establishment of an adequate bond, to implement new care prescriptions, improving adherence to the proposed treatment[5]. The importance of investments in the qualification of nurses is emphasized, as this professional is one of the main people responsible for the participation and support of the person in the management of their chronic condition[6].

Nursing consultations are considered protective factors for people with T2DM when promoting self-care. Nurses can provide educational efforts on foot care, insulin application, and healthy habits, as well as making themselves available to clarify questions[12]. It is believed that the holistic training of nurses, with a focus on biopsychosocial aspects, strengthen the relationship with the person with T2DM, since this is a disease that harms these people's lives, requiring more care supporting emotional reactions and the development of self-care[25].

Among all the possibilities of nursing interventions, health education stands out as a strategic field for the promotion of self-care for people with T2DM and show that counseling and the educational model, applied in nursing intervention, are effective in improving the metabolic control, as well as positive effects on self-care management[25].

However, the therapeutic process, for adequate care for people with T2DM, needs to be developed by a multidisciplinary team composed of social workers, physical educators, nurses, pharmacists, physicians, nutritionists, dentists, psychologists, among others, always with the participation of the person with T2DM, in all decisions, acting dynamically in self-treatment[2].

The reorganization of APS, according to the current health model, requires that all health professionals incorporate the CCM assumptions and promote assistance from the perspective of autonomy and empowerment of users[20]. The consensus of the professional nurse in promoting health education may indicate a practice of the other members of the multidisciplinary team that is merely prescriptive, a legacy of the curative model.

The educational practices conducted by working professionals, according to the CCM, are based on three communication styles: qualified professional listening; directing action and decision-making proposals for alternatives for the person[7].

As the training of health professionals is still strongly focused on the biomedical and technical model, there must be permanent education for the whole team that works, according to the CCM, expanding their knowledge, adopting effective communication and addressing new strategies for the care of people with chronic conditions[18].

It is worth noting that educational activities, aimed at self-care, are generally developed by professionals from the APS team, with continuous interventions directed at making people more deeply aware of their chronic health conditions to better manage them[3]. For this, the entire APS health team must implement supported self-care, using the tools proposed by CCM.

FINAL CONSIDERATIONS

This study presented the self-care practices for T2DM performed by older adults, allowing the identification of their main concerns on the progression of the disease, daily care, acknowledgment of problems and the way they seek health information.

The findings showed the potential that educational actions achieved, when aspects related to knowledge about complications related

to the disease and modifiable risk factors emerged, such as inadequate diet, smoking and sedentary lifestyle, indicating that investments in this sector consolidate good practices for supported self-care. It is noteworthy that the identification of the difficulty in changing eating habits resulted in psychological distress, requiring the professional to have prior knowledge of health technologies, proposed by the CCM, to support people with T2DM in the practice of self-care. The main points of weakness identified were related to foot care, indicating the need for the health team to strengthen educational actions and assessments for the screening of peripheral neuropathies, to promote self-care and prevent complications.

It is considered that there are still gaps in the knowledge of older adults with T2DM, which weaken self-care practices, from the perspective of the CCM, which can interfere with the achievement of stabilization of T2DM and, consequently, contribute to the onset of chronic complications. It is understood as a potential that the study revealed the nurse as a professional of great relevance to support self-care, in the perception of the older adult assisted by the APS, alluding to the rupture of the hegemony of the biomedical model about care practices. However, there is a need to verify the involvement of other team professionals with the care strategies proposed by the CCM, regarding health education actions for people with T2DM.

As contributions to the advancement of nursing and science, identifying how older adults understand the disease and manage their daily choices can help in the planning and development of professional interventions, focused on this population, and anchored in the proposal of CCM, using communication with qualified and sensitive listening to recognize the weaknesses for self-care, considering the specificities and experiences of older adults. Thus, support for gerontological self-care is based on improving health education actions as an important strategy for raising awareness about the disease and its repercussions, making those involved protagonists of care, with the possibility of positively reflecting on the health of this population.

As for study limitations, the chance of its results being influenced by characteristics related to the participants' local context, making it important to carry out studies like this in other settings.

The positive involvement of the older adult participants in the research is highlighted, which allowed a broad discussion of the actions, from the perspective of promoting self-care and in the user embracement posture, which favored the expression of the weak points, highlighting the fact that many were not submitted to the feet assessment.

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