Distress And Assistance At Mealtime: The Effect Of Confinement On People With Type 2 Diabetes

Aflição e Coadjuvação na Hora de Comer: Efeito do Confinamento Em Pessoas Com Diabetes Tipo 2

Aflicción y Coayuda En La Hora de Comer: El Efecto Del Confinamiento En Personas Con Diabetes Tipo 2

RESUMO

Objetivo: Compreender a influência do confinamento durante no comportamento alimentar de pacientes com diabetes tipo 2. Método: Conduzimos um estudo com abordagem qualitativa em dois serviços de atenção primária, localizados em Eusébio, Brasil, durante 2022. Realizamos visitas domiciliares para condução de entrevistas em profundidade com 11 pacientes com diabetes tipo 2 com pobre controle metabólico (hemoglobina glicosilada > 7%). A análise dos dados foi suportada pelo software IRAMUTEQ e pela descrição interpretativa. Resultados: Nos relatos dos pacientes verificamos a prevalência de palavras associadas a estratégias para o controle pessoal do diabetes. Durante as visitas domiciliares desvelamos 20 categorias de dados relacionados a dois pensamentos principais: a aflição e a coadjuvação sobre o próprio comportamento alimentar.Conclusão: É necessário intensificar ações de educação em saúde para pessoas com diabetes sob confinamento. Pois neste contexto elas experimentam sentimentos de aflição de falta de protagonismo no gerenciamento da sua alimentação.

DESCRITORES: Diabetes tipo 2; Comportamento alimentar; Confinamento.

ABSTRACT

Objective: To understand the influence of confinement on the eating behavior of patients with type 2 diabetes. Method: We conducted a study with a qualitative approach in two primary care services, located in Eusébio, Brazil during 2022. We carried out home visits to conduct in-depth interviews with 11 patients with type 2 diabetes with poor metabolic control (glycosylated hemoglobin > 7%). Data analysis was supported by the IRAMUTEQ software and interpretative description. Results: In the patients' reports, we verified the prevalence of words associated with strategies for personal diabetes control. During the home visits, we revealed 20 categories of data related to two main thoughts: distress and assistance with one's own eating behavior. Conclusion: It is necessary to intensify health education actions for people with diabetes under confinement. Because in this context, they experience feelings of distress due to lack of protagonism in managing their diet.

DESCRIPTORS: Type 2 diabetes; Eating behavior; Lockdown.

RESUMEN

Objetivo: Conocer la influencia del confinamiento en el comportamiento alimentario de pacientes con diabetes tipo 2. Método: Realizamos un estudio cualitativo en dos centros de atención primaria ubicados en Eusébio, Brasil, durante 2022. Realizamos visitas domiciliarias para realizar entrevistas en profundidad a 11 pacientes con diabetes tipo 2 con mal control metabólico (hemoglobina glicosilada > 7%). El análisis de los datos se apoyó en el software IRAMUTEQ y en la descripción interpretativa. Resultados: En los informes de los pacientes encontramos una prevalencia de palabras asociadas a estrategias para el control personal de la diabetes. Durante las visitas domiciliarias, descubrimos 20 categorías de datos relacionadas con dos pensamientos principales: angustia y coadjuvación sobre la propia conducta alimentaria. Conclusión: Es necesario intensificar las actividades de educación sanitaria para las personas con diabetes bajo encierro. Porque en este contexto experimentan sentimientos de angustia y falta de protagonismo en la gestión de su alimentación.

DESCRIPTORES: Diabetes tipo 2; Comportamiento alimentario; Encierro.

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INTRODUCTION

Even before the COVID-19 pandemic, adherence to dietary recommendations among people with diabetes was problematic. With the adoption of social isolation and lockdowns as health measures, a new stressor was added to the daily exercise of self-care in the diet of people with diabetes mellitus (DM).

The influence of confinement on human health has already been analyzed by some researchers. For example, there are studies that analyzed the effect of this health measure on the eating behavior of different groups: euglycemic pregnant women; the general population; adolescents and adults with DM 2. We also have investigations that evaluated the impact of confinement on the metabolic control of people with DM1; people with DM 2; and on the lifestyle of people with DM 2. [1-15]

Even so, there is still no consensus on the exact negative effects of confining people to their homes on self-care of eating among people with DM. On the other hand, the authors consulted were unanimous on one thing: confinement changed several aspects of the eating behavior of people with DM. [4,13] Incidentally, data from a meta-analysis showed that people with DM 2 under confinement suffer an increase in glycemic biomarkers (glycated hemoglobin and plasma glucose) and body weight. [10] We also have evidence that this increase in glycated hemoglobin was greater in patients who already had values above 6.5% before the lockdowns. And that the worsening was related to the patients' food choices during this period. [11, 12]

Another common point among the aforementioned studies that is worth mentioning: they were reports of epidemiological and/or review studies (with and/or without meta-analysis), some even based on secondary data. That is, to our knowledge, there is no published study with a qualitative approach capable of capturing other facets of this issue that are not tangible through statistical inference.

In the context of COVID-19, it is not known to what extent, but it is known that perceived stress negatively altered people's emotions and modulated their food choices.

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Some researchers have even devised a theoretical model called emotional eating. That is, based on perceived stress, people started to eat more foods rich in cereals and fats and less protein, resulting in their weight gain. The authors indicate that it is important to develop research that integrates the human sciences, culture and anthropology in understanding this process. [14, 15]

> “In general, the COVID-19 pandemic has brought problems linked to food insecurity, such as reduced accessibility to some types of food; reduced consumption of proteins and vegetables (given the rise in food prices) and changes in eating habits and behaviors that need to have their causes and consequences studied in depth. [16, 17]”

And the changes imposed by confinement during the COVID-19 pandemic may have been an agent of some of these processes in people with DM 2. Something that a qualitative analysis can reveal and, consequently, help to develop more inclusive public food and nutrition policies.

Thus, the objective of this study was to analyze the influence of confinement, during the COVID-19 pandemic, on the eating behavior of adults with DM 2 monitored in primary health care services.

METHOD

Study design and location

TThis is a qualitative interpretive study. The research was carried out in two primary health care centers in the city of Eusébio, Brazil, from October 2020 to August 2022.

Participants

We analyzed the electronic and physical medical records of the two services listed in this research and found that 72 people had their data updated in the health information systems. We set the following inclusion criteria for this research: being a person with a confirmed diagnosis of DM2 in medical records for at least six months; being registered in the health information system of the services participating in the research; being between 18 and 59 years of age; having current records of the glycated hemoglobin value in their medical records before the first confinement. On the other hand, we excluded from the study patients with psychiatric thought disorders and/or being a person with impaired physical mobility (bedridden).

According to the eligibility criteria, we obtained an initial sample of 15 people with a current glycated hemoglobin test, the average was 7.6% at that time. Of these, 02 were regularly using anxiolytics, 01 had not had a confirmed diagnosis of DM 2 for at least 6 months and 01 refused to participate in the study.

Through home visits, we conducted an in-depth interview with the participants. The interviews lasted approximately 90 minutes and were conducted by the main researcher using a voice recorder on a Samsung® smartphone. She is a woman, a nurse with 15 years of experience in primary health care and a specialist in family health. Incidentally, the interviewer was the family nurse responsible for the clinical care of the participants.

This interview was conducted using a script to better understand the information. We used four guiding questions to introduce the topic, respectively, namely:

1. When I say the word behavior or eating habits, what comes to your mind?
2. During the COVID-19 pandemic, what did you think of the experience of confinement?
3. Do you think that confinement changed your eating habits/behavior?
4. Do you think that the changes in your eating habits/behavior (during confinement) affected your diabetes?

Data analysis

The two main researchers of this study carried out the analysis of the qualitative and quantitative data. The qualitative analysis of the data was guided by Interpretive Description (ID) in the light of Sally Thorne (2016). This author proposes starting with an open reading of the transcribed text to obtain the meaning of the whole. Thus, the researchers read the material collected from the research several times, without focusing too much on the details at this initial stage of the analysis, but coding the sequences that were considered important for the analysis.

Based on the author's recommendations, we formulated some questions, starting from the premise that the knowledge acquired is still not sufficient. Thus, during the reading of the textual corpus we asked the following questions, respectively, namely:

1. What is seen?;
2. What is happening?;
3. What does it mean?

After this preliminary coding, some reports began to be labeled and grouped for better understanding in the form of concepts. The two main researchers discussed the concepts and the relationship between them to conclude the analytical process.

Ethical aspects

The study was approved by the University's Human Research Ethics Committee, in accordance with opinion 5,331,303.

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RESULTS

1. Participants

The majority of participants were female (9 patients), 6 were white, 8 were married or in a consensual union, and 9 lived with family members and/or partners.

The average age of participants was 53.18 years and family income was around US$240. Thus, the majority (5) had a purchasing power equivalent to the lower middle class in Brazil.

The interviewees had been diabetic for approximately 8.4 years and used sulfonylureas. They also reported (7) that they had relatives who also had diabetes. In general, the participants had 5 to 8 years of education and practiced physical activity regularly (at least five times a week). None of them consumed alcohol.

When assessing food consumption, high consumption (≥ 1-2 times a day) was found for the food groups meat and eggs; cereals/legumes; and vegetables and fruits. On the other hand, participants reported moderate consumption (2-4 or 5-6 times a week) for desserts and sweets; low consumption (once a week) for oils, snacks and canned foods; and practically no consumption (1-3 times a month) for sugary drinks.

Regarding the assessment of quality of life, only 03 participants did not feel suffering from living with diabetes. Therefore, in general, participants expressed a strong perception of suffering with the disease.

> “After careful reading of the reports by the two main researchers of this manuscript, the discourses were grouped according to their similarity.”

2. Qualitative findings from interviews

In total, we observed 20 pieces of data related to two main thoughts: distress at mealtime and static support for one's own eating behavior.

2.1 Distress when eating

When verbalizing their understandings about eating behavior during confinement, some participants, for different reasons, reported a state of distress. This is confirmed by the verbalization of many concerns regarding eating and its repercussions on the metabolic control of diabetes, which already presents its own morbidity peculiarities.

> **[...]** Eat healthy things, especially so that Diabetes doesn't increase, because mine is high, mine is very high... (E2)
> **[...]** So, follow the right diet, you can't eat everything, it has to be the right things... (E3)
> I need to take better care of myself, have a certain eating routine that helps control my glucose. (E4)
> **[...]** I live my life, because there are things I can't eat, so I avoid them. Someone offers me something, 'eat that', 'it's just once', 'it's not bad', yes it is, if I eat it once, my diabetes will get worse, right? So I avoid a lot of sweet things (E11).
> **[...]** Imagine the many things that happen in a person's life and add diabetes to it and everything gets worse... (E1)
> **[...]** I know I eat things I shouldn't eat. (E7)

Patients reported that confinement acted as a trigger for distressing thoughts, as they (participants) did not have a fruit, a juice; a certain essential food in their diet. Aspects that could interfere in the management of their chronic condition.

> **[...]** There were days (during confinement) when I would take my blood sugar test and it would be very high, due to poor diet. (E2)
> **[...]** we had to eat what we had. It affected me a lot (confinement), it's really bad to need fruit to eat and there wasn't any, to make juice, it was kind of difficult, it wasn't good. (E3)
> **[...]** what changes our Diabetes, this care that we must take with our diet. (E5)
> We have to learn how to eat (during confinement) ...(E6)

2.2 Static support on one's own eating behavior

Although at times participants showed themselves to be protagonists in taking care of their diet, in most of the speeches we perceived the opposite: a static coadjuvation in relation to managing their own diet during confinement:

> **[...]** I didn't think it (confinement) was right, but we couldn't do anything, we had to put up with it (confinement). (E1)
> It was bad for everyone, for us to go out to get food, we couldn't leave the house, so many times we had to send a family member... (E2)
> I thought it was really bad (confinement), we couldn't go out anywhere, to buy our food... (E3)
> So, it changed a little (confinement), because we couldn't go out, even when we were sick, we couldn't go out to buy something... (E1)
> More or less, because deep down I didn't take care of myself, I ate more things, more junk (E4)
> For me it wasn't that different **[...]** it didn't change much. (E7)
> No, it didn't influence it. It was just normal. (E9)
> **[...]** It's so hard for us to talk about it, because it's something (confinement) that I don't know how to say anything about, because it's such a difficult thing, I've been staying at home a lot...(E10)
> **[...]** I tried to control myself, in terms of eating foods that wouldn't make my glucose levels rise...(E4)
> **[...]** if my diabetes is really low, if I feel like I need it, I eat it, but sometimes it goes up a little...(E11)
> Yes, it did affect it, some things did. It

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went up, it didn't go down at all, it just went up. (E6).

I think so, because there are days when I have it and there are days when I don't have the right diet, to keep myself fed. (E10)

[...] It was hard for me, for me and for a lot of people...(E11)

So much has changed, that sometimes you don't even have the words to respond...(E10)

DISCUSSION

The most frequently mentioned words during the interviews were: food, diabetes, food, hindered; diet; home. And then in the qualitative analysis we found this to be a reflection of confinement, in view of the feeling of distress about managing their diet.

To understand this manifest concept, it is important to emphasize that the interviewees' diet was healthy and that none of them were sedentary. In other words, they had a coherent diabetes management, perhaps even before the pandemic, in two important items of the quartet of disease control (taking medication; controlling diet; regular physical exercise and self-monitoring of capillary blood glucose).

Therefore, reports of distress are justified because, to the same extent that confinement increased restrictions on places selling healthy, fresh and cheap food (such as street markets); it (confinement) also accentuated the stress and anxiety (both agents that disrupt glycemia) of these patients.

The emotional issue of worrying about the future and the possibilities of micro and/or macrovascular complications is common in people with long-term diabetes. [18] Taking into account that we identified that the feeling of suffering in living with the disease was already present in the patients in this study, it is important for primary care nurses to consider the effects of confinement in their care actions for people with diabetes.

For example, even though most of the interviewees were not sedentary, it is always important to maintain this practice of regular physical exercise in adapted spaces at home during times of confinement. It is already known that in addition to the positive metabolic effects, physical activity is also effective for people's psychological condition, in addition to being economically accessible. [19]

> “Some authors state that the COVID-19 pandemic has brought nutrition into a new era.”

However, the effects of confinement on the nutrition of people with diabetes are gradually being revealed. The fact is that among the few studies found on this subject, we did not identify any convergence in the comparison of findings.

In New Zealand, the authors concluded that confinement did not interfere with the eating habits of women with DM1, DM2 and/or gestational diabetes, despite their increased consumption of bread and breaded fish during this period. [20] In turn, in India, a cross-sectional study with diabetic adults concluded that during confinement 86.4% of them adhered to the diet and that confinement did not interfere with the metabolic control of DM2. [13]

In our analyses, we also noticed that the interviewees already had some level of stress in maintaining an appropriate eating pattern, which was aggravated by the confinement. Studies suggest that the confinement of the COVID-19 pandemic can trigger feelings related to food choices that can last up to four months after the confinement. The stress of the confinement event could lead to polyphagia and a change in the profile of foods eaten. In this case, people would favor foods rich in fat and calories. [1, 21-22]

> “Expressions observed in the reports are evidence of the interviewees' assistance, as they reveal indecisive, procrastinating and non-assertive individuals in certain contexts.”

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However, it should be noted that the lockdown limited, but did not prevent, people from moving to places where food was sold. Nor was the way food was prepared impaired. Therefore, we understand that patients played a supporting role in the management of their diet.

This may be an indication of weakened empowerment or emotional state due to the vulnerability of diabetics to COVID-19. As opposed to supporting, it is essential to strengthen the role of the person with diabetes regarding their self-care with regard to nutrition. And this does not mean an increase in the patient's individualism, but rather an incentive to make personalized health decisions. [23]

> "The leading role of self-care in diabetes is a multifactorial process anchored in the partnership between the caregiver and the person receiving care."

Therefore, health professionals need to prioritize strengthening the bond with the person with DM2 in their therapeutic and health education actions. [24] This is perfectly feasible in primary health care services given the longitudinal nature of health care in these settings.

To reduce the coadjuvation and increase the protagonism of people with DM2, it is necessary to focus on health education. In situations of confinement, in addition to the stressful event (social restriction), access to food and even health services may be difficult. These patients will need to be empowered about their chronic condition, which implies making adjustments to their diet, controlling anxiety and minimizing stress, simultaneously and alone.

> "In other words, health education for people with diabetes is the best therapeutic measure in situations of confinement, as it encourages self-decision making in health."

Although qualitative research does not prioritize identifying causes, but rather understanding phenomena, we understand that this research has some limitations; namely: the participants were from a single city and were mostly women; the interviews took place after both lockdowns, so memory bias is possible.

Even though the interviews did not take place during the two lockdowns that the participants experienced, we emphasize that the interviewees were adults or middle-aged people, without cognitive, psychiatric and/or dementia alterations that would compromise their reports. Regarding the possible local aspect of the phenomenon under study, it is important to note that several places around the world used lockdown as a health measure, and people with DM2 were considered a vulnerable group in the global panorama. Therefore, we recommend that new qualitative and/or mixed-methods investigations be developed in different locations and scenarios in order to deepen the understanding of the influence of lockdown on the eating habits of people with chronic health conditions and even healthy people. e até daquelas saudáveis.

CONCLUSIONS

Our findings support the hypothesis that people with DM2 in confinement situations may experience a feeling of distress, as well as present a supportive attitude regarding the management of their diet.

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