

Background

Type 2 diabetes mellitus (T2DM) is a chronic disease characterized by hyperglycemia resulting from impaired

To ensure dependability, the interviews were conducted by the same researcher and recorded using an audio recording device. The data were analyzed independently by two researchers. We aimed to ensure the reliability of the findings through continuous revisions by experts. To ensure transferability, the researchers thoroughly presented the study's context and the participants' perspectives [16, 17]. According to the principles of Graneheim and Lundman (2004), the data were carefully read repeatedly to identify the codes. Subsequently, these codes were reviewed and linked to form sub-themes and themes [15].

Ethical considerations

The study was conducted in accordance with the principles of the Declaration of Helsinki. Approval was granted by the Bayburt University of Ethics Committee (Date:14.09.2023/No:20–4). Informed consent, either written or verbal, was obtained from all participants or their legal guardians prior to enrollment. All participants were informed about the aims of the study, and their consent was obtained. The participants were assured that the information would be kept confidential. They were also allowed to interrupt the interview at any time. The participants were asked for permission to record the interviews. The participants were informed that the audio recordings would be used solely for the purposes of the

study, their personal information would not be shared with third parties, and each participant would be anonymized with codes (e.g., P1, P2). The security of the data was ensured by storing it in password-protected files.

Findings

The sociodemographic characteristics of the participants are presented in Table 1.

The data obtained from semi-structured interviews were grouped under four main themes (Fig. 1).

Theme 1. Difficulties with dietary management of diabetes
We found that the sub-themes of the main theme of Difficulties with dietary management of diabetes were the “Economic aspect of nutrition” and the “Inability to adapt to the diet”.

Sub-theme 1. Economic aspects of nutrition

The participants stated that they had financial problems due to low-income levels and the high cost of healthLanc9

"I have difficulty buying the food the doctor says... I get a low salary. I can buy healthy food once a month... Pasta is the food of the poor..." (P6).
"...healthy food is very expensive. My economic situation affects my health..." (P11).

Sub-theme 2. Inability to adapt to diet

Some participants stated that they had food-related difficulties because of diabetes. Some participants stated that diabetes makes it difficult to maintain eating habits and that they feel powerless due to dietary restrictions. Adults with diabetes have difficulty adhering to a healthy diet.

"It is very difficult to live with this disease. Everything is forbidden. You cannot eat what you want. You are weak because you cannot eat..." (P4).
"Eating a diet of greens makes me weak. It makes me feel like grass. Therefore, I also eat rice, bread, and sugar, but recently I have reduced them a little" (P16).

Theme 2. Individual difficulties

Some sub-themes of the main theme of Individual Difficulties were found to be "Physiological Difficulties", "Psychological Difficulties", and "Social Difficulties".

Sub-theme 1. Physiological difficulties

Some participants stated that they experienced physiological difficulties related to diabetes, such as dry mouth,

frequent urination, fatigue, and problems related to appetite and sleep. Additionally, they have stated that these situations negatively affect their sleep patterns, making their daily lives more difficult.

"This disease makes me eat a lot...I eat whatever I can find..." (P1).

"I experience dry mouth at night... I drink a lot of water, so I urinate a lot at night. It makes me sleepless..." (P19).

"Diabetes makes me very weak... I get tired very quickly. I feel tired" (P13).

Sub-theme 2. Psychological difficulties

Some participants stated that they experienced nervousness and fear. Some participants expressed that they were afraid of using insulin and that diabetes made them irri-

with diabetes face restrictions on religious practices and spending time outdoors due to their illness. Additionally, adults with diabetes are unable to fully fulfill their family responsibilities.

"I cannot go out in case my sugar drops. I am usually at home..." (P6).

"This disease restricts people... It affects our going out, we need to go out cautiously, and this causes distress" (P17).

"I want to fast but I cannot. I had a lot of difficulty when I fasted last Ramadan" (P9).

"I am very exhausted because of my illness; I cannot take adequate care of my children..." (P8).

Theme 3. Difficulties related to self-management in diabetes

The main theme of difficulties related to self-management in diabetes includes three sub-themes: 'Difficulties in blood glucose monitoring,' 'Difficulties in insulin injection practice,' and 'Difficulties in maintaining glycemic control.'

Sub-theme 1. Difficulties in blood sugar monitoring

Participant 18 (I a)7(m u)-19emic

“... my daughters help me a lot in coping with this disease... My daughter is a nurse... She helps me a lot...” (P9).

Discussion of findings

In this study, we explored the experiences of adults with T2DM in low socioeconomic status in Türkiye. The themes obtained from this study included difficulties with dietary management of diabetes, individual difficulties, difficulties related to self-management in diabetes and coping strategies.

Discussion of theme 1 findings: Difficulties with dietary management of diabetes

Adults with diabetes frequently encounter difficulties such as financial constraints and non-adherence in following dietary guidelines. In line with our findings, a study conducted in Iran reported that low socioeconomic status significantly hinders self-management of diabetes in adults with T2DM [18]. Similarly, a study conducted on homeless diabetes patients in Toronto noted that these patients had difficulty adhering to the recommended diets. Especially, socioeconomically disadvantaged groups face limitations in determining suitable food types and dietary options for diabetes management [19]. These studies emphasize the critical role of socioeconomic factors in shaping dietary behaviors in adults with diabetes and largely align with our findings.

Discussion of theme 2 findings: individual difficulties

Frequent urination at night, excessive thirst, excessive hunger, and extreme fatigue are known as the general symptoms of T2DM [20]. In our study, the participants reported experiencing dry mouth, frequent urination, fatigue, and loss of appetite. In addition, the participants stated that they had problems with sleep. The literature shows that insomnia is common among individuals living with diabetes and that sleep quality is generally low [21–22]. Diabetes-induced nocturia is one of the main causes of these sleep problems. Our findings reveal that diabetes is not limited to physical symptoms but is also associated with sleep disorders that negatively impact individuals' quality of life.

Diabetes mellitus has adverse psychological effects on individuals [23]. In this study, the participants stated that they were unnecessarily angry and afraid of using insulin. Kolbasovsky's (2004) study found that individuals with

information would be kept confidential. They were also allowed to interrupt the interview at any time. The participants were asked for permission to record the interviews. In addition, the participants were informed that the audio recordings would be used solely for the purposes of the study, their personal information would not be shared with third parties, and each participant would be anonymized with codes (e.g., P1, P2). The security of the data was ensured by storing it in password-protected files.

Consent for publication

Not Applicable.

Competing interests

The authors declare no competing interests.

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