

People with type 1 diabetes : Between quality of life and social support

Chelghoum Anissa

Abderrahmane Mira University of Bejaia, Mental Health and Neuroscience Laboratory
(Algeria), anissa.chelghoum@univ-bejaia.dz

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Abstract:

This study focuses on quality of life and social support among people with type 1 diabetes. Its aim is to describe and understand the nature of the quality of life of these participants, and to assess the quality of the social support they receive. To conduct this research, we adopted a qualitative approach using the clinical case study method. Semi-structured research interviews were conducted, supplemented by two scales: the SSQ6 social support questionnaire and the ADDQOL quality of life questionnaire.

Analysis of the data from the interviews and questionnaires revealed that all the participants had an impaired quality of life and a low level of social support. These results highlight the importance of social support in the psychological adaptation of people with type 1 diabetes, and underline the need for stronger support.

Keywords: *Quality of life ; Social support ; People with type 1 diabetes ; Type 1 diabetes; Chronic illness*

1. Problematic Introduction

Anyone can experience destabilising life events that can affect their psychological well-being, professional life and physical health. Among these events, chronic diseases, particularly diabetes, represent a major public health concern and are among the most prevalent chronic diseases. Given its growing prevalence, diabetes is projected to become the seventh leading cause of death in the world by 2030 (Nordisk, 2021). Marilou and Bruno (2001) define diabetes as a disease characterised by a problem with glucose metabolism, resulting in elevated blood glucose levels in the blood

(hyperglycaemia). It is caused either by a halt in insulin production by the pancreas (type 1 diabetes), or by a reduction in the pancreas' ability to produce insulin, combined with the body's resistance to the action of this hormone (type 2 diabetes). There are two main types of diabetes: type 1, which affects around 6% of diabetics, and type 2, which affects 92%. Other types of diabetes affect the remaining 2%.

The French Federation of Diabetics describes type 1 diabetes as an autoimmune disease in which the pancreas no longer produces insulin. It is most often triggered in childhood or early adulthood. The body no longer recognises the beta cells and

destroys them (the beta cells are destroyed by antibodies and immune cells, lymphocytes, produced by the body): we say that type 1 diabetes is an autoimmune disease. Glucose that cannot enter the cells remains in the bloodstream, causing blood glucose levels to rise.

The main symptoms include intense thirst, frequent urination, and rapid weight loss. This type of diabetes results from the disappearance of the beta cells in the pancreas, leading to a total insulin deficiency. The exact causes of the onset of type 1 diabetes are still unknown, but it is thought that a genetic predisposition genetic predisposition and certain environmental factors play an important role in its onset (<https://www.diabete.qc.ca>).

As reported by the French federation of diabetics, the International Diabetes Federation estimates that approximately 537 million people worldwide were living with diabetes in 2021, about half of whom are unaware of their condition, which is often remains undiagnosed.

As stated by Kidiss (2021), an estimated 25 million Africans were living with diabetes in 2021, representing 7.1% of the continent's total population. However, this figure is an underestimate, given that many people are pre-diabetic or misdiagnosed.

Abdelkrim (2023) reports that around four million people in Algeria have diabetes. According to Dr. Djamila Nadir, deputy director of prevention at the Ministry of Health: The number of people with diabetes in Algeria has reached around 4 million, including children and the elderly. She notes that the official figures probably underestimate the true prevalence of the

disease, as many cases go undiagnosed (<https://elwatan-dz.com>).

Also according to Abdelkrim (2023), Mr Saihi, the Algerian Minister of Health, has stated that if preventive measures are not taken, this number could reach 5 million diabetics by 2030.

The local public health establishment at Sidi-Aich, in the wilaya of Bejaia, Algeria, where the present study was conducted, recorded 5844 consultations at the Diabetes Centre in 2023. In 2024, this number increased by 614 cases, to a total of 6456 people.

As noted by the French Federation of Diabetics, diabetes can have a significant impact on the quality of life of those affected. They may experience feelings of stress, anxiety, depression and frustration due to the need to manage their disease on a daily basis. Fischer (2002) points out that the concept of quality of life is vast and can be defined in many ways. It can include income levels, lifestyle habits and health indicators. It is the product of the interaction of many psychological, health-related, environmental, economic and political factors. It is clear that the concept of quality of life appears simple, because it has become commonplace.

Quality of life is defined by the World Health Organisation (WHO) as an individual's perception of his or her place in life, in the cultural context and value system in which he or she lives, in relation to his or her goals, expectations, norms and concerns. It is a broad conceptual field, encompassing in a complex way a person's physical health, psychological state, level of independence, social relationships,

personal beliefs and relationship with their environment (Fischer, 2002).

Pouchot (2003) states that Patrick and Erickson define health-related quality of life as the value attributed to the length of life as a function of disability, functional level, perceptions and social opportunities modified by illness, injury, treatment or health policies.

According to Leplege (2019) argues that, for most authors, health-related quality of life is multidimensional, based on four main dimensions :

- The subject's physical state (autonomy, physical capacity).
- Somatic sensations (symptoms, consequences of trauma or therapeutic procedures, pain).
- Psychological state (emotionality, anxiety, depression).
- Social relationships and relationships with family, friends and work.

People with type 1 diabetes can therefore have a significant impact on the quality of life of sufferers, particularly in social terms. A study conducted in France revealed that the quality of life of people with type 1 diabetes is lower in the following domains : obstacles to activities and psychological suffering. The stress associated with managing the disease can lead to anxiety, depression and an altered self-image. Fear of hypoglycaemia and the need to monitor blood glucose levels can limit participation in certain social and professional activities (<https://www.santepubliquefrance.fr/>).

Another study looked at the difficulties faced by young adults aged between 18 and 40 living with type 1 diabetes. This study, carried out by French Federation of Diabetics, aimed to examine on mental

health and legal aspects. The results revealed the importance of information during treatment in improving patients' quality of life.

Similarly a nationwide study conducted in France on a nationally representative cohort of people with diabetes investigated the quality of life of people with type 1 diabetes. The results showed that individuals with type 1 diabetes had lower quality of life scores in the areas of obstacles to activities and psychological suffering. In addition, an HbA1c above 8% was associated with a lower mental health score, while characteristics such as female gender, obesity and previous hospitalisations were linked to more impaired physical health (<https://www.santepubliquefrance.fr/>).

Saudo et al. (2021) found that type 1 diabetes can have an impact on the quality of life of people with type 1 diabetes. However, appropriate management, psychological and social support, and the use of innovative technologies can help improve quality of life and enhance overall well-being. In this regard, the French Federation of Diabetics also points out that studies have shown that social support plays a significant role in how people with diabetes perceive their quality of life. A higher level of perceived social support is positively associated with a better quality of life.

Drageset (2021) states that the structural aspect of social support refers to the existence and size of a social network, and the extent to which the person is connected within a social network, like the number of social ties (quantity of the relationships) and the characteristics of the social exchanges between individuals (e.g., social

support activities, frequency of interactions). Relationships with family, friends, and members in organizations might contribute to social integration.

The same authors add that perceived support refers to a person's subjective judgment that support will be available when needed or have given help during times of need. The different, specific types of social support that an individual may experience include emotional support (listening support, comfort, and security), informational support (advice and guidance), esteem support (increasing the person's sense of competence), and tangible support (concrete assistance such as providing transportation or financial assistance).

Careeon et al. (2021) state that parental and family support play an important role in psychosocial well-being and diabetes management during young adulthood. Although young adulthood is characterized by growing independence, young adults become increasingly responsible for diabetes self-management, parents remain an important source of support.

Ramoussin (2020) mentions that social support is a variable widely studied in patients with diabetes, and that its protective role in relation to emotional distress and quality of life is well established. Most of the studies that have examined the impact of social support on emotional adjustment conclude that emotional support from family and friends is associated with good adjustment to the disease.

According to Ramoussin (2020), social support includes stable social relationships and positive interactions with others, which

can provide emotional, informational, and material resources (Ramoussin, 2020). Punthakee et al. (2018) reported the findings of a two-year Canadian study was conducted on social support and diabetes management in a sample of 100 young people with type 1 diabetes. This study revealed that social support was associated with better diabetes management. Specifically, participants with a high level of social support were more likely to have their blood glucose levels under control and to follow treatment recommendations.

Taken together, these findings suggest that type 1 diabetes influences the quality of life of people with type 1 diabetes, as well as their perception of the social support they receive. It is therefore relevant to describe these two aspects in people affected by this chronic disease.

To this end, the aim of our study is to describe the quality of life and perceived social support among people with type 1 diabetes.

In other words, how do people with type 1 diabetes describe their quality of life and the social support they perceive?

General hypothesis

People with type 1 diabetes have an impaired quality of life and perceive a low level of social support.

Specific hypotheses

1. People with type 1 diabetes have an impaired quality of life.
2. People with type 1 diabetes perceive a low level of social support.

2. Basic Terms of the Study:

Type 1 diabetes. Type 1 diabetes is a chronic autoimmune disease resulting from the immune-mediated destruction of

pancreatic β -cells, leading to an absolute insulin deficiency. Consequently, individuals with type 1 diabetes require lifelong insulin therapy to regulate blood glucose levels and prevent both acute and chronic complications (Subramanian et al., 2024).

Quality of life. Quality of life is defined as an individual's subjective perception of his or her position in life, taking into account personal goals, expectations, cultural context, physical health, psychological well-being, social relationships, level of independence, and environmental conditions. It is therefore considered a multidimensional concept that reflects how individuals evaluate their overall well-being and daily functioning (Fischer, 2002).

Social support. Social support refers to the emotional, informational, and practical assistance that individuals perceive as available from people within their social network, such as family members, friends, or healthcare professionals. Perceived social support reflects not only the availability of supportive relationships but also the individual's satisfaction with the support received, thereby contributing to psychological adjustment and well-being (Cohen & Wills, 1985)

3. Research Methodology :

3.1. Research Method:

According to Grawitz (2001), a method is the set of intellectual operations by which a discipline seeks to establish, demonstrate, and verify the knowledge it pursues, demonstrate them and verify them. The method consists of a series of stages and procedures enabling us to grasp reality, or at least part of reality .

This study is based on a qualitative approach that provides an in-depth understanding of the experiences and perceptions of six cases of people with type 1 diabetes. The study relied on the clinical case study method. Gagnon (2012) considers the case study to be an appropriate method for description, explanation, and prediction. It allows a complex phenomenon of interest to be understood and analysed in depth while taking its context into account (Dahl et al., 2014).

In this research, the case study clinical method enables an in-depth description and evaluation of the quality of life and perceived social support of people with type 1 diabetes, taking into account both their individuality and the overall context. In addition, this approach allows us to explore not only the subjective reality of individuals, but also their emotions, their thoughts and the behaviours they adopt in the face of their illness.

3.2. Case Studies:

The study included six cases of individuals with type 1 diabetes: three men and three women, aged between 26 and 45. All had been living with type 1 diabetes for more than five years.

The selection of the study cases was determined according to certain criteria, described below.

The inclusion criteria we used were as follows :

- Cases aged between 21 and 46, as our study focuses on the adult population.
- Cases diagnosed with type 1 diabetes.

-Cases who had been living with diabetes for more than four years to ensure that they had sufficient experience with their disease. As for the exclusion criteria, we excluded :
-Individuals diagnosed with type 2 diabetes, as the present study focused exclusively on people with type 1 diabetes.

3.3. Study Tools:

Given the objectives of this research and the method and approach adopted, we used three data collection tools to collect data: the semi-structured research interview, the Audit of Diabetes-Dependent Quality of Life (ADDQoL) questionnaire and the Sarason social support perception scale.

The semi-structured research interview, as a qualitative data collection technique, enables the collection of verbal data focusing on the subjective experience of the cases regarding their illness. It provides an in-depth understanding of their experiences, particularly in relation to their quality of life and their perception of the social support they receive. It also contributes to the interpretation of the collected data.

Furthermore, this technique places the researcher in direct contact with the cases, facilitates the establishment of a relationship of trust that is essential for obtaining authentic responses, and provides them with the opportunity to express themselves freely about their experience of living with type 1 diabetes. A semi-structured interview guide was specifically developed for this study. It was organized into five main themes. The interview guide was structured as follows :

Theme 1: Medical history and diabetes-related information. This theme aimed to collect information on the type of diabetes, its onset, and the circumstances surrounding the diagnosis, in order to better understand the cases' medical history and the context of their illness.

Theme 2: Experience of living with diabetes. This theme explored how the cases experienced and coped with the disease, with particular attention to the difficulties encountered in daily life.

Theme 3: Quality of life. This theme aimed to explore the perceived impact of type 1 diabetes on the various dimensions of quality of life.

Theme 4: Social support. This theme examined the cases' perceptions of the social support available to them, including support from family members, friends, and healthcare professionals, as well as the influence of diabetes on their social relationships.

Theme 5: Future perspectives. This theme explored the cases' expectations, concerns, and future plans in order to understand how living with type 1 diabetes influenced their perception of the future.

As reported by Mohsen (2016), the Audit of Diabetes-Dependent Quality of Life (ADDQoL) questionnaire was developed in the UK by Dr Clare Bradley in 1999 to measure an individual's perception of the impact of diabetes on their quality of life. It is a specific questionnaire based on the generic SEIQoL (Schedule for the Evaluation of Individual Quality of Life) questionnaire. It initially contained 13 items, then 18 after the 2002 revision, and now has 19 after the latest revision, which has also simplified the instrument. This questionnaire can be used

with both type 1 and type 2 diabetic patients. It enables patients themselves to identify and select the aspects of their lives that are important to them and where they would like to see improvement. In this way, they use their own value system and priorities.

The most widely used scale of perceived social support is the Social Support Questionnaire (SSQ) developed by Sarason et al. (1983), in its short six-item version (SSQ6), translated into French by Rascle, Bruchon-Schweitzer, and Sarason in 2005. This scale measures two dimensions: the perception of the availability of support if needed in six different situations (availability) and the degree of satisfaction associated with the support received, assessed on a scale of 1 (very dissatisfied) to 6 (very satisfied).

It thus provides two scores for each of these dimensions: the availability of social support and the associated satisfaction.

3.4. Space and Temporal Framework:

This research took place at the "Maison Diabétique", part of the Public Proximity Health Establishment (EPSP), in Sidi-Aich, in the wilaya of Bejaia.

EPSP is a public health establishment set up in 1986. The "Maison Diabétique" is a center created on February 12, 2002 by the EPSP of Sidi-Aich. This center provides care for people living with all types of diabetes. Data was collected individually. Each semi-structured interview lasted approximately 45 minutes per case. The administration of the ADDQoL questionnaire and the SSQ6 scale took approximately 8 to 10 minutes for each case.

4. Results and Discussion:

4.1. Some of the research results:

Analysis of the data obtained from the semi-structured research interviews revealed the diversity of the cases' subjective experiences of type 1 diabetes. Their experiences demonstrate the difficulty of living with this disease and its influence on several aspects of their lives, notably their psychological and physical well-being and their perception of the future and their family and social relationships.

We will now present some of the findings for each case. The names used are pseudonyms to protect the anonymity of the cases.

Case 1 : Ilyes, a 26-year-old man, holds a bachelor's degree and works in a laboratory. He was diagnosed with diabetes at the age of 14. He reports that he administers his insulin injections himself and that he does not follow a strict diet, but adapts his diet to his needs to avoid feelings excessively full. Despite a stressful hospital stay at the time of his diagnosis, Ilyes has acquired crucial skills thanks to therapeutic education.

However, he expresses fears about his diabetes and renal failure, which requires haemodialysis. He feels that his diabetes has reduced his self-esteem and self-confidence, and has weakened his family relationships due to the constraints that his illness imposes on his daily life. These constant worries have led to mild sleep disturbances, anxiety, isolation and irritability. All of these factors, he says, prevents him from maintaining a good quality of life.

Ilyes does not consider his life to be satisfying or enriched by positive relationships. He confirms that his father is an essential support and constantly

encourages him. However, his illness prevents him from enjoying his life to the full. In this respect, he considers that diabetes affects his leisure activities, travel, holidays, social life, romantic relationships, physical appearance, motivation, reactions to others, living conditions, freedom to eat and drink, and believes that his working life would be much better without diabetes.

The results of the quality of life questionnaire (ADDQoL) indicated an overall poor quality of life, with a score of (-0.05).

The results of the social support scale (SSQ6) indicated a low level of perceived availability of support from people around him, with a score of 19/54. The satisfaction score also indicated a low level 15/36.

Case 2: Loubna, a 38-year-old woman, finds it difficult to manage her diabetes because of daily insulin injections, which disrupt her daily life and make her feel ashamed. This feeling of shame leads her to minimise the importance of her illness by denying it. She reports that diabetes has affected several aspects of her life, including her daily activities, self-confidence, physical appearance, dependence on others, and freedom to eat and drink. Her professional life and ability to travel have also been negatively affected.

She receives family support in managing her blood glucose levels and emotional support from a friend. The family also helps her maintain a healthy lifestyle and maintain appropriate dietary habits. This enables her to maintain a stable social life. Loubna aspires to become a teacher and remains positive about her future. She feels that her current quality of life is neither good nor bad.

The results of the quality of life questionnaire (ADDQoL) revealed a poor quality of life, with a score of -2.10.

The results of the social support scale (SSQ6) showed a low level of perceived availability of social support, with a score of 18/54. The satisfaction score reflected an average level of perceived social support 18/36.

Case 3: Yasmine is a 45-year-old married woman, mother of two children, and secretary to a public writer. She described the impact of diabetes on her quality of life and social relationships. She perceives diabetes as a source of isolation and suffering. She often hides her illness because of feelings of shame and fear of being judged, particularly by her in-laws.

Yasmine feels isolated, even within her family, and avoids talking about her illness because she fears criticism. The death of her father, who was her main support system, was traumatic for her and reinforced her feelings of loneliness. Her sister-in-law provides invaluable support, but she feels that her support network is insufficient to deal with the day-to-day challenges of her illness. Her illness has caused her to withdraw socially and to reduce her interactions to avoid judgement. Yasmine is concerned about the complications of diabetes and her ability to look after her children. In order to provide a good quality of life for her little family, she feels she will need more support.

The results of the quality of life questionnaire (ADDQoL) demonstrated a poor quality of life, with a score of -1.22.

The results of the social support scale (SSQ6) revealed a low level of perceived availability of social support, with a score of

15/54. The satisfaction score showed an average level of perceived social support 20/36.

Case 4: Mohamed is a 39-year-old married man, father of three children, who works as a cook. He has been hospitalised several times and initially had difficulty accepting his diagnosis. Over the years, he has acknowledged that coping with diabetes has remained challenging, although he has gradually adapted to the daily care required to manage his condition.

During the early years following his diagnosis, he was reluctant to inject insulin in public. However, he has gradually overcome this fear. He reports that he now leads a balanced life and follows a strict diet. His wife plays an important role in his care, helping him to manage his illness and providing both practical and emotional support.

Mohamed perceives major changes in his social interactions since his diagnosis, as he is unable to integrate his illness into his life. He says that he is pessimistic due to the daily constraints imposed by diabetes and fears that he will not be able to manage hypoglycaemic episodes.

The results of the quality of life questionnaire (ADDQoL) confirmed a poor quality of life, with a score of -0.34.

The results of the social support scale (SSQ6) revealed a very low level of perceived availability of social support, with a score of 5/54. The satisfaction score showed an average level of perceived social support, with a score of 17/36.

Case 5 : Mourad is a 34-year-old married man, father of two children, and a French teacher. He manages his diabetes by regularly monitoring his blood glucose

levels and administering insulin. However, the management of his condition is complicated by irritable bowel syndrome, which has led to episodes of hypoglycaemia due to delayed meals. His initial hospitalisation to stabilise his blood glucose levels was a stressful and challenging experience. Nevertheless, the support provided by healthcare professionals helped him adapt to living with diabetes.

Mourad seems to have integrated the management of his diabetes into his daily routine, enabling him to lead a relatively normal life. He says that his family and friends offer him discreet emotional support, which he nevertheless feels is insufficient. His wife plays a crucial role in encouraging him and helping him to cope with emergencies.

Although Mourad is determined to maintain proactive management of his diabetes, he is concerned about possible long-term complications. He is considering leaving his country to experience new things.

His assessments indicate a poor overall quality of life. He perceives that some of the people around him are not available to help him, and his level of satisfaction with the support he receives is very low. On the other hand, he feels that his quality of life would be slightly better without the drinking restrictions, and much better in terms of social relationships.

The results of the quality of life questionnaire (ADDQoL) showed a poor quality of life, with a score of -0.58.

The results of the social support scale (SSQ6) demonstrated a low level of perceived availability of social support, with a score of 16/54. The satisfaction score

reflected an average level of perceived social support, with a score of 22/36.

Case 6: Samra is a 32-year-old woman with a master's degree who works as a food hygiene inspector. She manages her condition through insulin injections, strict blood glucose monitoring, a balanced diet, and regular physical activity. Following a period of poor adherence that led to complications, she has adopted a more rigorous approach to managing her diabetes. The support of her parents and fiancé plays an important role in her ability to cope with the disease.

However, Samra expresses emotional difficulties, particularly during visits to the dentist and in certain social interactions. She remains somewhat pessimistic about her future, and expresses concern about the impact of her illness on a future pregnancy. She would also like to carry out scientific research into genetics, diabetes and oral health.

She receives emotional support from her parents and fiancé, although the perceived availability of people willing to provide support remains low. Her assessments indicate a generally poor quality of life.

The results of the ADDQoL questionnaire indicated a generally poor quality of life, with a score of -6.53.

The results of the social support scale (SSQ6) demonstrated a very low level of perceived availability of social support, with a score of 18/54. The satisfaction score reflected an average level of perceived social support, with a score of 24/36.

According to the results obtained from the analysis of the semi-structured interviews and the ADDQoL quality of life scale, we found that our six cases with type 1 diabetes

had a poor quality of life. The scores obtained ranged from -0.05 to -6.53. The interpretation of the interview data and the SSQ6 scores indicates that all six cases perceived a low availability of social support when help was needed. The scores obtained range from 9.25 to 35.18.

4. 1.1. Results of the Content Analysis of the Semi-Structured Interviews:

The content analysis of the six semi-structured interviews revealed three main themes that characterize the experiences of people living with type 1 diabetes.

Theme 1: Altered quality of life and psychological burden

All six cases described diabetes as a chronic condition that substantially affected their quality of life. Daily insulin injections, dietary restrictions, fear of complications, repeated hospitalisations, and the burden of continuous disease management were perceived as major constraints. Several cases also reported emotional difficulties, including anxiety, shame, reduced self-esteem, irritability, pessimism, and concerns about the future.

Theme 2: Perceived social support: between available support and unmet needs

Although family members, spouses, friends, and healthcare professionals represented important sources of emotional and practical support, all six cases perceived that the availability of support remained insufficient. Several cases expressed feelings of loneliness, social withdrawal, or fear of being judged because of their illness. Case 3 stated that she often concealed her illness because of shame and criticism from relatives, while Case 5 considered the

support received from family and friends to be discreet but insufficient. Overall, the interviews highlighted the importance of social support while revealing persistent unmet support needs.

Theme 3: Adaptation to diabetes and future concerns

The interviews also showed that adaptation to diabetes is a gradual and ongoing process. While several cases reported having acquired effective self-management skills and incorporated diabetes care into their daily routines, they continued to express concerns about long-term complications, future health, family responsibilities, and professional life. Therapeutic education, family support, and personal coping strategies facilitated adaptation; however, uncertainty about the future remained a common concern across the six cases.

4. 2. Discussion of the Hypotheses:

Having presented the findings of the semi-structured interviews, the quality of life questionnaire (ADDQoL), and the social support scale (SSQ6), we will now discuss these findings in light of the hypotheses proposed in this study.

The influence of type 1 diabetes on the quality of life of the cases.

Discussion of the first hypothesis: People with type 1 diabetes have an impaired quality of life.

According to the findings obtained from the analysis of the semi-structured interview and the administration of the ADDQoL questionnaire, the cases included in this study exhibited an impaired quality of life. The ADDQoL scores, ranging from -0.05 to -6.53, indicate that type 1 diabetes had a

considerable impact on their overall quality of life. These findings therefore support the first hypothesis.

Our results are consistent with those of Altman et al. (2022) who revealed that the quality of life of people with type 1 diabetes is generally poor. Although many were independent and participated in social activities, medical complications were common. Participants had poor awareness of the signs of hypoglycaemia, which complicated the day-to-day management of their diabetes. In addition, the results highlighted the difficulty of living with type 1 diabetes, which requires dietary constraints, blood glucose monitoring and multiple insulin injections, together with the constant fear of chronic complications and hypoglycaemia.

The findings may also be related to those of Näiditch and Hehn (2021) who revealed that improving the quality of life of people with diabetes is as important as improving their glycaemic control. Quality of life was significantly better in people with type 2 diabetes (-2.47) than in those with type 1 diabetes (-2.80). This difference was due to the consequences of the disease and its treatment, which are probably greater for people with type 1 diabetes than for those with type 2 (insulin, risk of hypoglycaemia, risk of complications, etc.).

Our results are also comparable to those of the study by Yazidi et al (2020), which aimed to assess the quality of life of adult subjects with type 1 diabetes and the factors that could influence it. The results showed that the quality of life of these participants would be better in the absence of diabetes. Similarly, the study identified several factors associated with impaired quality of life,

including age ≥ 33 years, poor socio-economic status, long-standing diabetes, lower daily insulin dose.

The influence of type 1 diabetes on the cases' perception of social support.

Discussion of the second hypothesis:

People with type 1 diabetes perceive a low level of social support.

The findings obtained from the analysis of the semi-structured interviews and the SSQ6 perceived social support scale showed that all the cases included in this study reported a low level of perceived social support, particularly regarding the availability of people who could provide assistance. The overall social support score was 77.78%, indicating that the experience of living with type1 diabetes negatively influenced their perception of social support. These findings therefore support the second hypothesis.

Our results are consistent with the study by Walger (2009) on empowerment and social support for people living with diabetes. This study highlights the crucial role of social support in the empowerment process of people with diabetes. It shows that social support, whether from family, friends or healthcare professionals, is a key factor in improving patients' autonomy and quality of life. However, the results of this research indicate that diabetes influences the perception of social support.

Similarly, the present findings are in line with those of Belhadj et al. (2019) study, which focused on inadequacies in diabetes management. Participants reported a lack of medical and social support.

Overall, the findings of this study support the general hypothesis. The six cases reported an impaired quality of life together

with a low level of perceived social support. The qualitative findings, supported by the ADDQoL questionnaire and the SSQ6 scale, indicate that these two dimensions are central to the experience of living with type 1 diabetes

5. Conclusion:

The results of this study show that quality of life is significantly influenced by the way in which individuals manage their disease on a daily basis, as well as by their ability to cope with the multiple challenges imposed by diabetes, in particular its daily demands, including blood glucose monitoring, insulin administration and diet management.

Furthermore, type 1 diabetes has a significant impact on the perception of social support. Participants expressed low satisfaction with the availability of support groups such as friends, family and healthcare professionals when needed, as well as an overall low level of satisfaction with perceived support.

Our findings are consistent with many previous studies, confirming that people with type 1 diabetes have an impaired quality of life and a poor perception of social support. This study has highlighted the major difficulties experienced by the six cases included in this research, both in terms of quality of life and social support.

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