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# Quality of Life and Psychological Stress among People with Diabetes: A Clinical Multiple-Case Study at Al-Zahraoui Hospital in M'Sila

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## Abstract

This study aimed to investigate quality of life and psychological stress among people with diabetes through a clinical multiple-case study involving five diabetic patients receiving follow-up care at Al-Zahraoui Hospital in M'Sila. A clinical approach was adopted using a personal and clinical data sheet, a semi-structured clinical interview, and measures of quality of life and psychological stress. Each case was analyzed individually, followed by a cross-case comparison. The findings revealed variations among the cases in their experiences of living with diabetes and its psychological and daily implications, highlighting the role of individual, social, and disease-related characteristics. The study emphasizes the importance of integrated diabetes care that combines medical treatment with psychological and social support.

**Keywords:** Diabetes; Quality of Life; Psychological Stress; Psychological Adjustment; Clinical Study.

## Introduction

Diabetes mellitus is one of the chronic diseases that has increasingly become a major health challenge, not only because of its direct effects on physical functioning, but also because of the ongoing demands it places on individuals in their daily lives. Living with diabetes often requires adherence to therapeutic and dietary regimens, continuous monitoring of health status, regular medical examinations, and ongoing clinical follow-up. These requirements may compel individuals to reorganize aspects of their lifestyle in accordance with the nature of the disease and its

management demands. Accordingly, understanding the experience of individuals living with diabetes should not be limited to medical indicators alone; rather, it should also encompass the psychological and social dimensions of the illness, as well as its impact on quality of life.

Within this context, health-related quality of life has become a fundamental concept in the study of chronic diseases, as it reflects how individuals perceive their health status and its impact on various aspects of their lives. The World Health Organization defines quality of life as an individual's perception of their position in life within the context of the culture and value systems in which they live, and in relation to their goals, expectations, standards, and concerns. It is a broad concept that encompasses physical health, psychological well-being, social relationships, and the individual's relationship with their environment.

Quality of life is particularly important among individuals living with diabetes because the chronic nature of the disease requires long-term adaptation and continuous coexistence with its demands. This may affect their ability to fulfill social, occupational, and family roles, engage in everyday activities, and maintain a satisfactory level of well-being. Furthermore, the impact of diabetes varies considerably from one individual to another depending on health status, disease duration, treatment regimen, psychological and social circumstances, and the level of support available within the individual's social environment. Algerian studies have reported variations in the quality of life of individuals with diabetes, with differences in the dimensions that appear to be most prominent from one case to another (Chelebi & Bournane, 2021; Bouadjelal & Brahimi, 2018; Azzak & Lamouchi, 2017).

Alongside quality of life, psychological stress constitutes an important dimension of the experience of living with a chronic illness. From the transactional perspective of stress, stress is not determined solely by the presence of a stressful situation or event; rather, it is also associated with how individuals perceive and appraise that situation and with the resources they believe are available to them to cope with it. From this perspective, the demands associated with a chronic illness may become a source of psychological stress when patients perceive them as exceeding their coping capacities, threatening their psychological balance, or disrupting their established way of life (Lazarus & Folkman, 1984).

Psychological stress among individuals with diabetes may be associated with several aspects of living with the disease, including continuous adherence to treatment, dietary and lifestyle modifications, concerns regarding health status, fear of complications, and the burdens associated with regular medical follow-up. In this regard, the concept of diabetes distress refers to a range of emotional experiences and psychological concerns that may arise specifically from the demands of diabetes

management and its day-to-day requirements. Such distress may, in turn, affect patients' well-being and their diabetes self-management behaviors.

The literature emphasizes the importance of examining the relationship between psychological well-being and quality of life among individuals with diabetes. Elevated levels of stress and illness-related concerns may negatively affect an individual's sense of well-being and satisfaction with life, whereas psychological resources such as psychological hardiness, social support, and adaptive coping strategies may help individuals manage the demands of the disease and maintain a better quality of life. Algerian studies have identified an association between psychological variables and quality of life among individuals with diabetes and have highlighted the importance of psychological hardiness in predicting health-related quality of life (Waked, 2019; Larbi & Kara, 2023; Chouiel, 2016).

From a clinical psychology perspective, examining these dimensions also makes it possible to understand the illness experience at the individual level rather than relying solely on generalized quantitative descriptions. Individuals living with diabetes do not necessarily experience the disease in the same way, even when they share similar health characteristics. Their illness experience is shaped by the interaction of personal, familial, social, and psychological factors, in addition to disease duration and treatment characteristics. A case-study approach therefore provides an opportunity to examine the uniqueness of each individual's experience, understand how the disease is perceived, identify the sources of psychological stress associated with it, and explore how this experience affects everyday life and the individual's ability to live with the condition. An Algerian clinical study has highlighted the importance of integrated medical, psychological, and social care in improving quality of life among individuals with diabetes (Djeriou, 2022).

Against this background, the present study investigates quality of life and psychological stress among individuals living with diabetes through a multiple-case clinical approach conducted at Al-Zahraoui Hospital in M'sila. The study examines five individuals diagnosed with diabetes in order to explore the psychological specificity of each case, identify areas of similarity and difference among them, and examine the factors that may help explain variations in quality of life and psychological stress across the cases under investigation.

### 1.1. Research Problem:

Living with diabetes represents an ongoing experience that may require individuals to modify their daily habits and lifestyle. The demands associated with disease management, treatment, and medical follow-up may constitute a source of psychological stress to varying degrees. At the same time, patients' ability to adapt to the disease while maintaining their relationships, social roles, and daily activities may influence their perceptions of quality of life. However, this experience does not take a

uniform form across all individuals with diabetes. Consequently, a multiple-case clinical approach is particularly relevant for examining the uniqueness of individual experiences and understanding them within their psychological, social, and health-related contexts.

Accordingly, the present study addresses the following main research question:

- How are quality of life and psychological stress manifested among individuals living with diabetes through a multiple-case clinical study conducted at Al-Zahraoui Hospital in M'sila?

This main question gives rise to the following sub-questions:

- How is quality of life manifested among the cases under investigation?
- What is the nature of psychological stress experienced by the cases under investigation?
- How does living with diabetes and complying with its treatment requirements affect the psychological and daily lives of the cases?
- What are the similarities and differences among the cases with regard to quality of life and psychological stress?
- What individual, disease-related, and social factors may explain the variations among the cases?

### 1.2.Research Hypotheses:

#### General Hypothesis:

- Quality of life and psychological stress vary among individuals living with diabetes according to their individual, disease-related, and social characteristics, as well as the circumstances surrounding their experience of living with the disease.

#### Sub-Hypotheses:

- Quality of life varies among the cases under investigation according to their individual, disease-related, and social characteristics.
- Psychological stress differs among the cases according to the nature of each individual's experience with the disease and its treatment requirements.
- Living with diabetes and complying with its treatment requirements affect the psychological and daily aspects of the cases to varying degrees.
- The cases differ in quality of life and psychological stress according to disease duration and the circumstances surrounding each case.

- Psychological, social, and disease-related factors contribute to explaining the variations among the cases in terms of quality of life and psychological stress.

### 1.3. Significance of the Study:

The significance of the present study lies in its examination of an important psychological dimension of the experience of individuals living with a chronic disease, namely quality of life and psychological stress, while adopting a clinical perspective that enables a deeper understanding of the uniqueness of each individual case. The study also has practical significance, as its findings may contribute to strengthening psychological and social care for individuals with diabetes and promoting greater integration between medical and psychological care.

### 1.4. Objectives of the Study:

The present study aims to:

- Identify the nature of quality of life among the cases living with diabetes.
- Examine the nature and level of psychological stress among the cases under investigation.
- Understand the impact of living with diabetes on the psychological and daily lives of individuals with the disease.
- Identify the similarities and differences among the five cases.

## 2. Theoretical Framework:

### 2.1. Quality of Life among Individuals Living with Diabetes:

**2.1.1. The Concept of Quality of Life:** Quality of life is regarded as one of the fundamental concepts in psychology and mental health. Scholarly interest in this concept has gradually shifted from an exclusive focus on medical indicators of disease toward a broader consideration of how individuals perceive their lives and health status, as well as their ability to fulfill their various roles. The World Health Organization defines quality of life as an individual's perception of their position in life within the context of the culture and value systems in which they live, and in relation to their goals, expectations, standards, and concerns. This definition emphasizes that quality of life is a subjective and multidimensional construct influenced by physical and psychological health, level of independence, social relationships, and the individual's surrounding environment (The WHOQOL Group, 1995).

The concept of quality of life becomes particularly important in the study of chronic diseases because the persistence of illness requires individuals to adapt to a new health condition over an extended period and may necessitate modifications to their everyday lifestyle. Accordingly, the

assessment of a patient's condition should not be restricted to symptoms and medical indicators; it should also consider the extent to which the disease affects daily functioning, psychological well-being, social relationships, and the individual's sense of satisfaction with life (El Achhab et al., 2008).

2.1.2. Health-Related Quality of Life among Individuals with Diabetes: Health-related quality of life represents an important dimension in the study of chronic diseases and refers to an individual's perception of the effects of their health condition and its treatment on different areas of life. This is particularly evident among individuals with diabetes, as the disease involves continuous demands, including adherence to treatment, dietary regulation, blood glucose monitoring, and regular medical follow-up. These requirements may affect patients' lives in different ways from one case to another.

Having diabetes does not necessarily imply a similar reduction in quality of life among all patients. Multiple factors contribute to shaping the individual's experience, including disease duration, type of treatment, the presence of complications, family and social support, adaptive capacity, and the psychological resources available to the patient. Thus, quality of life partly reflects the way individuals deal with their illness rather than merely the medical severity of the disease.

A study conducted by Chelebi and Bournane (2021) among a sample of individuals with diabetes in M'sila Province found that quality of life was generally positive, with the physical dimension ranking first, followed by the environmental, psychological, and social relationship dimensions. This finding highlights the multidimensional nature of quality of life and the need to consider its various dimensions when assessing the experience of individuals living with diabetes (Chelebi & Bournane, 2021).

2.1.3. Dimensions of Quality of Life among Individuals with Diabetes: Quality of life encompasses a set of interrelated dimensions. Among the most prominent is the physical dimension, which relates to health status, energy, and the ability to perform daily activities. The psychological dimension concerns emotions, affective experiences, satisfaction, and adaptation. The social dimension relates to family and social relationships, while the environmental dimension encompasses living conditions and access to healthcare and essential resources. The significance of these dimensions lies in their ability to conceptualize the patient as an integrated whole rather than reducing their condition to its medical aspects alone (The WHOQOL Group, 1995).

From a psychological perspective, diabetes may manifest through persistent concerns about health status, fear of complications, or a sense of restrictions imposed on one's lifestyle. Socially, the disease may affect an individual's participation in certain activities or alter the nature of their relationships with those around them. Economic and treatment-related demands may also influence the

individual's sense of security and stability. Therefore, understanding quality of life among individuals with diabetes requires consideration of these dimensions as an interconnected whole.

2.1.4. Psychological Factors Influencing Quality of Life: Quality of life is not determined solely by health status; it is also influenced by psychological characteristics that help individuals cope with illness. Patients who possess stronger adaptive capacities, receive adequate social support, and perceive diabetes as a manageable condition may have a different psychological experience from patients who experience a persistent sense of helplessness or threat.

Several Algerian studies have highlighted the importance of psychological factors in explaining quality of life among individuals with diabetes. Larbi and Kara (2023) found an association between psychological hardiness and health-related quality of life among individuals with diabetes, highlighting the importance of psychological resources in helping patients cope with the demands of the disease. Other Algerian studies have also examined the relationship between stress-coping styles and quality of life among individuals with diabetes (Larbi & Kara, 2023; Chouiel, 2016).

Accordingly, quality of life may be understood as an outcome of the interaction between an individual's health condition and their psychological and social resources. This perspective is particularly relevant to the present study because a multiple-case clinical approach makes it possible to identify how these factors vary from one case to another rather than merely determining an overall level of quality of life.

## 2.2. Psychological Stress among Individuals Living with Diabetes:

### 2.2.1. The Concept of Psychological Stress:

Psychological stress is a phenomenon closely associated with the way individuals perceive and interpret the events and situations they encounter, rather than being determined solely by external circumstances. Lazarus and Folkman conceptualize stress as arising from a transactional relationship between the individual and the environment when the individual appraises situational demands as exceeding their available resources or coping capacity. Accordingly, the same event may constitute a major source of stress for one person while having a considerably weaker impact on another, depending on their appraisal of the situation and their psychological and social resources (Lazarus & Folkman, 1984).

For individuals with diabetes, the chronic nature of the disease and its treatment requirements may constitute a set of circumstances that necessitate continuous adaptation. Some patients may perceive dietary regulation, medication adherence, and regular medical follow-up as a daily burden, whereas others may be able to integrate these requirements into their lives more easily. This variation demonstrates that psychological responses to diabetes are not uniform across patients.

2.2.2. Sources of Psychological Stress among Individuals with Diabetes: The sources of psychological stress among individuals with diabetes are diverse and may arise from the disease itself, its treatment, or the circumstances surrounding the individual. On the one hand, the chronic nature of the disease may create a persistent sense of responsibility for monitoring one's health. On the other hand, dietary and therapeutic restrictions, together with repeated medical follow-up, may constitute a psychological burden for some patients. Fear of future complications or concerns about losing control over the disease may further intensify feelings of anxiety and preoccupation.

Social and economic factors may also contribute to psychological stress, including difficulties in meeting treatment-related expenses and the potential impact of the disease on employment and family responsibilities. However, the influence of these factors varies from one individual to another according to personal and social circumstances, the way the disease is interpreted, and the individual's coping capacity.

2.2.3.Diabetes-Related Distress: Recent literature distinguishes between general psychological stress and diabetes distress, which refers to a range of negative emotional experiences directly associated with living with diabetes and managing its demands. This experience may include feelings of treatment burden, concerns about disease control, fear of complications, and exhaustion resulting from continuous monitoring and self-management demands.

A recent systematic review indicated that diabetes distress is a common psychological experience among individuals living with diabetes and may affect psychological well-being as well as certain behaviors related to disease management. Attention to this experience is therefore essential when examining the psychological dimension of diabetes, particularly in studies seeking to understand patients' subjective experiences (Morales-Brown et al., 2024).

2.2.4. Psychological Stress in Algerian Studies: Several Algerian studies have confirmed the presence of psychological stress among individuals with diabetes at varying levels. Waked (2019), in a study involving 100 individuals with type 2 diabetes, found moderate levels of psychological stress, while quality of life was also assessed at a moderate level among the participants. The study examined the relationship between the two variables, highlighting the importance of considering the psychological dimension when addressing diabetes (Waked, 2019)

Chouiel (2016) also examined the relationship between behavioral patterns, stress-coping strategies, and quality of life among individuals with diabetes. This further underscores the importance of how patients cope with stress in shaping their experience of living with the disease. Psychological stress, therefore, cannot be adequately understood independently of the coping and adaptation strategies employed by the individual.

### 2.3. Relationship between Psychological Stress and Quality of Life among Individuals with Diabetes:

From a theoretical perspective, psychological stress and quality of life are interconnected through a dynamic relationship. The demands associated with chronic illness may increase the psychological burden experienced by individuals, while persistent stress may negatively affect life satisfaction and the ability to perform everyday roles. Conversely, reduced quality of life may increase an individual's sensitivity to stressful experiences, thereby contributing to a continuing cycle of reciprocal influence between the two dimensions.

Waked (2019) reported moderate levels of psychological stress and a moderate level of quality of life among individuals with type 2 diabetes, with a weak association between the two variables. This finding highlights the importance of examining the patient's psychological experience within its broader context rather than assuming a simple and direct relationship between psychological stress and quality of life (Waked, 2019).

From the perspective of the present study, differences among cases in psychological stress and quality of life may be explained by a range of factors, including disease duration, treatment characteristics, family and social circumstances, patients' perceptions of their illness, and their ability to adapt to it. Consequently, a multiple-case study may reveal dimensions that remain obscured when relying exclusively on group-level statistical averages.

### 2.4. The Clinical Approach to Understanding the Experience of Individuals with Diabetes:

The clinical approach is particularly valuable in the study of chronic diseases because it goes beyond determining the level of a psychological variable and seeks instead to understand the individual's illness experience within its broader context. Through interviews and case studies, it is possible to explore the history of the disease, the individual's response to diagnosis, their attitude toward treatment, the changes that have occurred in their life, the sources of stress they encounter, and the strategies they employ to cope with these demands.

A multiple-case study enables comparison among a limited number of cases in order to identify similarities and differences and to understand the factors that may account for variations in quality of life and psychological stress. It is therefore consistent with the objective of the present study, which is not to achieve statistical generalization to all individuals with diabetes, but rather to develop a deeper understanding of the psychological and lived experiences of the cases under investigation.

The importance of this approach is further reinforced by the multidimensional nature of quality of life and the growing scholarly interest in diabetes distress. Quantitative scores alone may not adequately capture how individuals experience their illness or the meaning they attribute to it. Clinical analysis therefore makes it possible to connect quantitative or descriptive findings with the

personal, familial, and social context of each case (The WHOQOL Group, 1995; Morales-Brown et al., 2024).

## 3. Applied Section:

### 3.1. Research Method:

The present study falls within the scope of clinical research aimed at understanding the psychological experience of individuals living with diabetes by exploring the uniqueness of each case and examining the nature of their quality of life and psychological stress. Given the nature of the research topic and its objectives, a clinical case-study approach was adopted, as it is considered appropriate for investigating psychological phenomena within their individual contexts through the collection of comprehensive information concerning the participant's health, psychological, and social circumstances.

### 3.2. Study Setting and Location:

The study was conducted at Al-Zahraoui Hospital in M'sila, a healthcare institution that provides care and follow-up for a number of patients with chronic diseases, including individuals living with diabetes. The institution was selected as the study setting because the five cases included in the study were receiving medical follow-up there.

The study was conducted within the context of the routine follow-up received by the cases, while taking into consideration the requirements of the clinical approach and the need to provide appropriate conditions for collecting information related to the psychological, social, and health status of each participant.

### 3.3. Study Sample:

The study sample consisted of five (05) cases of individuals diagnosed with diabetes, who were purposively selected from among patients receiving follow-up care at Al-Zahraoui Hospital in M'sila.

The selection of five cases was consistent with the nature of the multiple-case clinical study. The study was not intended to produce statistical generalizations concerning the broader population of individuals with diabetes; rather, it sought to develop an in-depth understanding of the psychological and lived experiences of the cases under investigation and subsequently compare them with one another.

In selecting the cases, consideration was given to ensuring that diabetes had been medically confirmed and that the participants were in a condition that allowed for clinical interviewing and the collection of information relevant to the research topic. Their willingness to participate in the study was also taken into account.

### 3.4. Research Instruments:

The study relied on a set of instruments intended to provide a comprehensive understanding of the cases under investigation. These primarily included the following:

**3.4.1. Preliminary Data Form:** A data collection form was used to obtain general and disease-related information concerning each case. The form included information relevant to the objectives of the study, such as age, sex, marital status, educational level, occupation, duration of diabetes, type of treatment, and selected information related to medical follow-up.

**3.4.2.Clinical Interview:** The clinical interview was employed as a fundamental instrument within the clinical approach. It aimed to explore the patient's experience of living with diabetes, their acceptance of the disease, the changes that had occurred in their lives following diagnosis, the sources of psychological stress they encountered, and the extent to which the disease affected their family, social, and daily lives.

The interview also made it possible to explore aspects that may be difficult to capture through standardized measures alone, particularly the patient's personal feelings, perceptions of the disease, attitudes toward treatment, and ways of dealing with the demands associated with diabetes.

**3.4.3. Quality of Life Scale:** A scale appropriate for assessing quality of life among the cases under investigation was administered to identify the overall level of quality of life and its various dimensions. Its findings were also used to complement and support the information obtained through the clinical interviews.

The assessment of quality of life is particularly important in the present study because it makes it possible to determine the level of quality of life for each case and subsequently examine it in relation to the psychological, social, and disease-related information obtained during the clinical interview.

**3.4.4. Psychological Stress Scale:** A psychological stress scale was administered to determine the level of stress experienced by each case and to identify the extent to which psychological stress manifestations associated with living with diabetes were present.

The results obtained from the scale were considered alongside the clinical information, thereby allowing for a more comprehensive understanding of each case rather than relying solely on the quantitative score obtained from the scale.

### 3.5. Study Procedures:

The study was conducted with the five cases during their follow-up at Al-Zahraoui Hospital in M'sila. After identifying cases that met the objectives of the study, preliminary information concerning each

case was collected, followed by the administration of clinical interviews and the research instruments adopted for the study.

Each case was treated as an independent unit of analysis. The information pertaining to each case was first organized and subsequently analyzed in relation to the research topic, with particular emphasis on quality of life, psychological stress, and the factors associated with both. Following the individual analysis of the cases, a comparative analysis was conducted to identify similarities and differences among them.

Throughout the study procedures, confidentiality of the participants' personal information was maintained. Their real names were not used; instead, identification codes were employed, such as Case 1, Case 2, Case 3, Case 4, and Case 5.

### Method of Case Analysis:

The analysis of the cases combined quantitative data derived from the assessment scales with qualitative data obtained through the clinical interviews. Initially, each case was analyzed independently by presenting its personal and disease-related characteristics, followed by describing its levels of quality of life and psychological stress before interpreting the findings in light of the psychological and social context of the case.

A comparative analysis of the five cases was then conducted by identifying similarities and differences among them, particularly with regard to quality of life, psychological stress, duration of diabetes, treatment characteristics, family and social circumstances, and coping strategies used to deal with the disease.

This analytical approach provides a deeper understanding of the psychological experience of individuals living with diabetes and highlights the fact that the impact of the disease is not identical across all cases. Rather, it is shaped by a combination of personal, psychological, social, and disease-related factors.

### 3.6. Presentation and Analysis of the Cases under Investigation:

The present study included five cases of individuals living with diabetes who were receiving follow-up care at Al-Zahraoui Hospital in M'sila. Each case was treated as an independent unit of analysis, taking into consideration the personal, educational, occupational, and disease-related characteristics of each participant. The purpose of this presentation is to provide an initial profile of the cases under investigation, as a basis for subsequently analyzing their quality of life and psychological stress and relating these dimensions to their individual and disease-related circumstances.

The preliminary data indicate that the five cases ranged in age from 63 to 76 years and comprised four males and one female. The cases also differed in terms of educational level, occupational status, and duration of diabetes. These characteristics may provide a useful contextual basis for understanding potential variations in psychological experiences and patterns of adaptation to the disease.

### 3.6.1. General Characteristics of the Cases:

| Case | Name and Initials | Sex | Educational Level | Occupational Status | Year of Diagnosis | Age |
|---|---|---|---|---|---|---|
| Case 1 | Ahmed L. | Male | Middle school | Retired | 2016 | 76 |
| Case 2 | Said F. | Male | Secondary school | Retired | 2014 | 69 |
| Case 3 | Mabaraka B. | Female | Primary school | Homemaker | 2017 | 71 |
| Case 4 | Belkheir M. | Male | Middle school | Employed | 2013 | 63 |
| Case 5 | Mohamed B. | Male | Middle school | Retired | 2020 | 72 |

Source: Prepared by the researcher.

The table shows that all five cases belong to a relatively older age group, with the youngest participant being 63 years old and the oldest 76 years old. This indicates that the present study addresses the experience of diabetes among individuals who are at a stage of life that may be accompanied by changes in social and occupational roles, variations in daily activity levels, and increased attention to health status. However, these demographic characteristics alone do not permit conclusions regarding levels of quality of life or psychological stress; rather, they provide an essential contextual background for interpreting the psychological findings emerging from the clinical interviews and assessment scales.

With regard to sex, the sample consisted of four male cases and one female case. This distribution should be interpreted cautiously, as the purpose of a multiple-case clinical study is not to conduct a statistical comparison between males and females, but rather to understand the individual characteristics and experiences of each case. Accordingly, the presence of a single female case does

not permit conclusions regarding sex-related differences, but it does allow a female illness experience to be incorporated into the range of cases examined.

In terms of educational level, the cases displayed different educational backgrounds. One case had completed secondary education, three had completed middle-school education, and the third case had received primary education. Educational attainment may play a role in how patients understand the nature of diabetes and its treatment requirements, as well as in their ability to comprehend health information and follow medical recommendations. Nevertheless, this remains a tentative assumption that requires support from the information obtained through the clinical interviews and cannot be considered a direct finding of the present study.

Regarding occupational status, three cases were retired, one was a homemaker, and one remained employed. This variation reflects differences in the daily roles and routines of the participants. Retirement may involve a lifestyle that differs from continued employment, while the domestic context of the female case may make her experience of managing diabetes more closely related to household responsibilities and family relationships. The employed case, meanwhile, may face professional responsibilities in addition to treatment demands, potentially affecting the organization of health-related and everyday activities.

3.6.2. Analysis of Case 1: Ahmed L.: The first case was Ahmed L., a 76-year-old man with a middle-school educational background who was retired and had been diagnosed with diabetes in 2016. These characteristics place him within the oldest age group among the cases under investigation, with several years having elapsed since the onset of the disease.

Disease duration is particularly relevant when analyzing this case because the participant is no longer at the initial stage of diagnosis but has been living with the demands of diabetes and its treatment for several years. A prolonged period of living with the disease may indicate that an individual has developed greater experience in managing its everyday demands. In other circumstances, however, continued treatment and medical follow-up may contribute to feelings of burden or psychological fatigue. Therefore, disease duration should not be assumed to automatically result in either lower or higher quality of life. The actual experience of the case should instead be examined through the clinical interview and the results of the psychological stress and quality-of-life measures.

Retirement also represents an important variable in understanding the individual's daily context. It may provide greater flexibility for medical follow-up and treatment management, while in some cases it may also be associated with changes in social roles or reduced occupational and social activity. Accordingly, the analysis of this case should consider how the participant perceives

retirement, the extent to which it affects daily activity and social relationships, and the meaning he attributes to his experience of living with diabetes.

Age is likewise an important element of the clinical analysis, not because it should be regarded as inherently negative, but because it constitutes part of the context in which the patient experiences the disease. The clinical interview should therefore explore the individual's level of independence in everyday life, the nature of the support received from family members, the extent to which he relies on others in managing treatment, and his perceptions of his future health.

Accordingly, Case 1 represents an older retired individual who has been living with diabetes for several years. Its clinical interpretation therefore requires an understanding of how the individual has adapted to the disease over the long term rather than focusing merely on the presence of diabetes.

3.6.3. Analysis of Case 2: Said F.: The second case was Said F., a 69-year-old man with a secondary-school educational background who was retired and had been diagnosed with diabetes in 2014. This case is characterized by a higher educational level than that of most of the other cases, in addition to a relatively long period of living with the disease.

Educational attainment may facilitate the understanding of health recommendations and the processing of information related to the disease and its treatment. However, this possibility cannot be established on the basis of demographic characteristics alone. The clinical analysis should therefore determine the extent to which this educational background has actually contributed to the participant's understanding of diabetes and to his ability to organize treatment, dietary practices, and medical follow-up.

The participant's retired status also places him in a similar occupational category to Cases 1, 3, and 5, thereby providing an opportunity to compare how retirement may be reflected in quality of life and psychological stress across cases. Nevertheless, similarity in occupational status does not necessarily imply similarity in psychological experience.

The relatively long duration of diabetes indicates that the participant has lived with a chronic condition for an extended period, making adaptation a central theme in the clinical analysis. Over time, the patient may have developed particular ways of dealing with treatment demands and health-related restrictions. However, the nature and effectiveness of these strategies can only be determined through the clinical data.

From a clinical perspective, particular attention should be paid to the participant's acceptance of the disease, his emotional responses to continued treatment, the extent to which he perceives diabetes as affecting his independence and everyday life, and the nature of his family and social relationships, which may function either as sources of support or as potential sources of stress.

3.6.4. Analysis of Case 3: Mabaraka B.: The third case was Mabaraka B., a 71-year-old woman with a primary-school educational background who was a homemaker and had been diagnosed with diabetes in 2017. She was the only female case among the five participants, which adds another dimension to understanding the individual experience of living with the disease, without treating her case as a basis for comparison between males and females.

This case differs from the others in two principal respects: sex and occupational status. She was a homemaker rather than an employed or retired individual. Consequently, the analysis of her quality of life is more closely situated within the context of domestic life, family relationships, and everyday household responsibilities, in addition to the way she manages treatment and medical follow-up within her family environment.

Her primary-school educational background also warrants attention to how she understands medical and health-related information and the extent to which she is able to comprehend recommendations concerning treatment, diet, and medical follow-up. A lower level of formal education should not, however, be interpreted as necessarily indicating poorer adaptation or lower quality of life, as other factors may compensate for or shape this experience, including family support, experience of living with the disease, adaptive capacity, and life satisfaction.

From a clinical perspective, family relationships are particularly relevant in this case. The analysis should explore the nature of the support she receives, who assists her with treatment management when necessary, how her family perceives her illness, and whether diabetes has altered her roles within the family.

The domestic nature of her daily life may also mean that some sources of psychological stress differ from those experienced by an employed individual. Accordingly, the clinical interview should explore the relationship between the disease and household responsibilities, the extent to which treatment and dietary requirements affect her everyday activities, and her emotional responses to living with a chronic condition.

Thus, Case 3 represents a clinically meaningful example of an older woman living with diabetes within a domestic and family context. This context may give rise to specific patterns of adaptation and psychological stress that are not necessarily apparent in the other cases.

3.6.5. Analysis of Case 4: Belkheir M.: The fourth case was Belkheir M., a 63-year-old man with a middle-school educational background who remained employed and had been diagnosed with diabetes in 2013. This case represents the youngest participant in terms of age while simultaneously having one of the longest durations of diabetes, making it particularly relevant for comparative analysis.

The occupational status of this case differs clearly from that of most of the other participants. While three cases were retired and one was a homemaker, this participant remained employed. He may therefore be required to balance professional responsibilities with treatment and medical follow-up demands, which may have implications for time management and daily activity.

From a psychological perspective, continued employment may constitute a potentially beneficial factor insofar as it enables the individual to maintain a social role and a sense of activity and independence. Conversely, it may also constitute an additional source of stress if treatment or medical appointments conflict with occupational responsibilities. Work should therefore not be characterized in advance as either a positive or negative factor; rather, the analysis should consider how the participant perceives his relationship with work.

Disease duration is also noteworthy, as the diagnosis dates back to 2013, indicating that the participant has lived with diabetes for an extended period. This makes it important to examine how his response to the disease has evolved and whether he has developed greater capacity to adapt to its demands or, alternatively, whether the persistence of the disease and its treatment has resulted in the accumulation of psychological stressors.

Accordingly, this case provides an important basis for comparison with the retired participants, particularly with regard to everyday quality of life, activity, independence, and sources of psychological stress. Nevertheless, any final interpretation should be grounded in the findings of the clinical interviews and psychological assessment measures.

### 3.6.6. Analysis of Case 5: Mohamed B.:

The fifth case was Mohamed B., a 72-year-old man with a middle-school educational background who was retired and had been diagnosed with diabetes in 2020. This case is distinguished by having the most recent diagnosis among the five participants.

This characteristic provides an important basis for comparison with cases that have lived with the disease for a longer period, particularly with regard to adaptation to diagnosis and treatment. The participant may be at a different stage in the trajectory of living with diabetes, such that experiences associated with diagnosis or adjustment to treatment demands may still be more salient. Nevertheless, this cannot be assumed without reference to the clinical data.

The participant's age of 72 years also places him among the older individuals in the study, warranting attention to his level of independence in daily activities and the family and healthcare support available to him. An adequate support network may constitute an important resource in helping him manage the everyday demands associated with diabetes.

At the same time, his retired status places him in the same occupational category as three other cases, allowing for comparison of the individual experiences of retired participants. If differences in quality of life or psychological stress emerge among these participants, such differences should not be attributed to retirement alone. Other factors should also be considered, including disease duration, treatment regimen, family support, and psychological adaptation.

Accordingly, Case 5 represents an older retired individual who has been living with diabetes for a shorter period than the other cases. This makes the case particularly relevant for examining how differences in the duration of living with the disease may relate to psychological experience, provided that such interpretations are supported by the findings of the clinical assessment instruments.

3.6.7. Comparative Analysis of the Five Cases: The preliminary analysis of the five cases reveals several similarities and differences that may be relevant to understanding variations in quality of life and psychological stress. With regard to age, all cases belong to an older age group, ranging from 63 to 76 years. Thus, age constitutes a shared contextual characteristic across the cases.

In terms of sex, four cases were male and one was female. This distribution does not permit a quantitative comparison between males and females. Nevertheless, it allows different individual experiences to be incorporated into the clinical analysis, particularly because the female case also differs in terms of educational and occupational characteristics.

Regarding educational level, the cases were distributed across primary, middle-school, and secondary education. Three cases had a middle-school educational background, one had completed primary education, and one had completed secondary education. This diversity is relevant when considering differences in how individuals understand their illness and manage treatment, while emphasizing that educational attainment cannot be regarded as a direct indicator of quality of life or psychological stress.

With regard to occupational status, three cases were retired, one was a homemaker, and one remained employed. This distribution reflects clear differences in daily lifestyle patterns. An employed individual may face work-related demands, whereas retirement may involve changes in social roles and daily activity. The homemaker's experience, meanwhile, may be more closely connected to household and family responsibilities.

The cases also differed substantially in terms of year of diagnosis. The earliest diagnosis dated back to 2013, whereas the most recent occurred in 2020. This variation is particularly relevant to the present study because it provides an opportunity to examine how the experience of living with

diabetes may differ according to disease duration, without assuming a linear relationship between duration of illness and psychological status.

Overall, the demographic and disease-related characteristics of the five cases indicate a meaningful degree of diversity within the study group, despite their shared diagnosis of diabetes and relatively advanced age. From a clinical perspective, this diversity represents a strength of the study, as it allows for the comparison of distinct individual experiences rather than treating the cases as a homogeneous group.

## 4. Conclusion:

Based on the multiple-case clinical study conducted with five individuals living with diabetes who were followed at Al-Zahraoui Hospital in M'sila, it is evident that living with diabetes extends beyond its physical and medical dimensions to encompass various aspects of the individual's psychological, social, and everyday life. The nature and extent of this impact do not appear to be uniform across all cases; rather, they vary according to the specific characteristics of each individual, including age, sex, educational level, occupational status, disease duration, and the personal and social circumstances surrounding the illness experience.

The clinical approach made it possible to examine each case independently, while seeking to understand the individual's experience of the disease within its personal, social, and health-related context. A comparative analysis was subsequently conducted to identify similarities and differences across cases. This perspective is particularly relevant to the study of chronic diseases, as health indicators alone are insufficient to explain how illness affects an individual's life. It is equally important to consider how patients perceive their condition, their ability to adapt to its demands, and the psychological and social resources available to them.

The findings further suggest that quality of life among individuals with diabetes should be understood as a multidimensional construct encompassing physical and psychological well-being, social relationships, and the ability to perform everyday roles and activities. Psychological stress, meanwhile, represents an important dimension that may accompany long-term disease management, treatment and follow-up requirements, and concerns about possible complications. Consequently, effective diabetes care should not be limited to medical treatment but should also address patients' psychological and social needs.

This perspective is consistent with the literature indicating that health-related quality of life among individuals with diabetes is influenced by a range of psychological, social, and health-related factors. Algerian studies have likewise reported variability in quality of life and psychological stress among this population. Other studies have highlighted the importance of psychological hardiness,

adaptation, and psychological support in improving quality of life among individuals living with diabetes (Chelebi & Bournane, 2021; Waked, 2019; Larbi & Kara, 2023).

Accordingly, the overall findings of the study support the importance of adopting a comprehensive clinical perspective in the care of individuals with chronic diseases, one that recognizes the uniqueness of each patient rather than reducing the individual to a medical condition. The findings also underscore the need to integrate psychological and social dimensions into diabetes-care programs in order to facilitate the early identification of psychological stress and adaptation difficulties, while strengthening the psychological and social resources that can help individuals achieve more positive adjustment to life with diabetes.

In light of the foregoing, this study emphasizes the importance of multidimensional care for individuals living with diabetes, in which medical treatment is complemented by psychological and social support. Greater attention should be given to psychological well-being within patient follow-up programs, particularly by listening to patients' concerns, identifying sources of psychological stress, and helping them develop more adaptive ways of coping with the disease and its demands.

Accordingly, it is recommended that psychologists be more systematically integrated into diabetes-care teams and that periodic assessments be conducted to identify psychological stress, adjustment difficulties, and changes in quality of life. Patients and their families should also be provided with greater awareness of the importance of psychological and social support. Future studies could expand the scope of this research by including larger numbers of cases and comparing individuals with type 1 and type 2 diabetes, as well as examining the effects of disease duration, treatment modality, and family support on quality of life and psychological stress.

Although this study represents a clinically oriented investigation based on a limited number of cases, it contributes to highlighting the importance of viewing individuals with diabetes as persons experiencing a multidimensional illness journey rather than merely as carriers of a chronic disease. From this perspective, improving quality of life should be regarded as a fundamental objective of diabetes care, no less important than achieving adequate medical control of the disease.

*Recommendations:*

Based on the findings of the present study, the following practical recommendations can be proposed:

- Integrating psychologists more systematically into diabetes-care teams, enabling them to contribute to the monitoring and management of psychological aspects alongside medical follow-up.

- Implementing periodic assessments of quality of life and psychological stress among individuals with diabetes, particularly those experiencing difficulties in adjustment or noticeable changes in their daily lives.
- Developing educational and counseling programs for patients aimed at improving their understanding of the disease, facilitating adaptation to treatment and follow-up requirements, and strengthening their ability to cope with illness-related sources of stress.
- Involving the family in psychological and social care, given the potentially important role of family support in helping patients cope with the demands of diabetes and maintain psychological and social stability.
- Taking individual differences into account when providing psychological support, ensuring that care considers the patient's age, disease duration, social and occupational circumstances, and the specific difficulties they experience.

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