

# Psychological assessment of quality of life in a Moroccan population with chronic disease

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## Abstract

During the past decades, the predominance of chronic diseases was increased with a large number of people living with chronic disorders that can affect their quality of life. The aim of this study is to assess quality of life of patients with chronic diseases in the Hospital of Kenitra in Morocco. Data were collected in a cross-sectional study of 85 patients with chronic pathologies such as diabetes, cardiovascular and respiratory disease hospitalized in El Idrissi Hospital in Kenitra, Morocco, during April and May 2021. Quality of Life Satisfaction Scale (SWLS) was used as a life satisfaction measure of subjective well-being. The mean satisfaction score is  $26.08 \pm 0.71$ , with a minimum score of 6 and a maximum score of 36. The median is 30: 25% have a satisfaction score less than 23; 25% have a score between 23 and 30 and 50% have a score more than 30; therefore the definition of classes allows to rename the first category as pathological, the second category to watch and the last category are normal cases. In fact, 26% are suffering people; 69% to watch and only 5% are normal cases. These results show that there are differences between quality-of-life satisfaction scores and the nature of the disease. This explains that the nature of the pathology impacts the psychological state of the patients. To protect the psychological state of the patients, it was necessary to integrate psychologists at the level of hospitals and health centers, as well as the availability of care, whose objective was to improve the quality of life of the patients.

**Keywords:** Psychological assessment, quality of life, patients, chronic diseases, Morocco.

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## 1. Introduction

According to World Health Organization (WHO) [2](2014), 68% of deaths worldwide in 2012 were caused by chronic disease, or 38 million people. In 2030, the number of deaths could exceed 52 million. These diseases are essentially of behavioral origin with a genetic determinant decreasing with advancing age. In France, 15 million people suffer from chronic illnesses and 9 million are declared to have a long-term condition [3]. Patients must deal with persistent health problems, avoid new illnesses, overcome family and socio-economic difficulties, and confront views that are not always kind [4,5]. They learn to adapt to their illness in order to live in good conditions. For people with chronic diseases, the perception of time is disrupted compared to healthy individuals [6]. Time is appreciated differently; it is experienced more intensely. It makes life events more salient. Chronically ill patients become more sensitive to negative events. According to WHO [7], Quality of life (QOL) is defined as an individual's perception of their position in life

in relation with the culture and the value systems in which they live for their standards, goals, concerns and expectations. The same, the evolution of this concept is part of a context of longer life expectancy, real or perceived therapeutic progress, and shared medical decision [8]. Quality of life is increasingly used as the primary outcome measure in studies to evaluate treatment effectiveness [9]. Furthermore, quality of life (QOL) remains a concept that is sometimes poorly understood and still poorly used. Medical decision-making is most often based on so-called objective criteria, which do not take into account the qualitative aspect. However, today, certain assessments of quality of life make it possible to quantify health states and to inform medical decisions. QoL assessment has become a standard practice in the management of chronic diseases [10].

In Morocco, despite the importance of evaluating quality of life in patients, few scientific studies have been carried out according to major scientific databases such as Scopus, Sciencedirect and Web of Science. For this reason,

the objective of our study is to determine the profile of satisfaction with quality of life among patients with chronic diseases at the hospital of Kenitra in Morocco.

## 2. Materials and methods

This is a cross-sectional epidemiological study conducted during the April and May 2018, in El idrissi hospital in Kenitra, Morocco. This study was conducted on 85 patients with chronic pathologies such as diabetes, cardiovascular and respiratory disease hospitalized in El idrissi Hospital in Kenitra, Morocco. To reach our objective, we used two questionnaires, one related to the sociodemographic and clinical parameters of the patients and the other questionnaire related to the satisfaction of the quality of life, by using Quality of Life Satisfaction Scale (SWLS), which has been widely used as a life satisfaction measure of subjective well-being. SWLS scores have been shown to correlate with measures of mental health and to predict future behaviors such as suicide attempts. In the field of health psychology, the SWLS has been used to measure the subjective quality of life of individuals with serious health problems. The SWLS is a 7-point Likert-style response scale. The range of possible scores is 5 to 35, with a score of 20 representing a neutral point on the scale. Scores between 5 and 9 indicate that the respondent is extremely dissatisfied with their life, while scores between 31 and 35 indicate that the respondent is extremely satisfied [11]. For a better reliability of the results, we calculated the Cronbach's index, which allows us to verify the consistency with which several items of a study or a test evaluate the same skill or characteristic. The higher the values of Cronbach's alpha, the stronger the internal consistency. A reference value of 0.7 is frequently used. In general, if Cronbach's alpha is greater than 0.7, it indicates that the items in the study or test measure the same skill or characteristic. If Cronbach's alpha is less than 0.7, the items may not be measuring the same skill or characteristic in a consistent manner. However, the appropriate benchmark to use also depends on the norms of your field of study and the number of items in the analysis.

### Statistical analysis

The collected data were entered into Excel 2013 for descriptive and analytical analyses. The demographic and socio-professional characteristics of the teachers were presented in the form of tables and graphs. We established the inter and intra item correlations between the studied factors and variables. Differences were considered significant with  $P < 0.05$  and trends with  $P < 0.10$ .

## 3. Results and Discussions

The study we conducted was carried out on 84 patients encountered during their medical visits to the Idrissi Hospital in Kenitra. These patients suffer from cardiac and respiratory diseases and diabetes. The average age of the patients was  $39.5 \pm 0.89$  years, with a minimum age of 20 years and a maximum age of 62 years. The sex ratio was balanced. This study involved 38.1% of patients with heart failure; 36.9% with diabetes and 25% with respiratory failure. Before proceeding to the analysis of this instrument; we will consider evaluating the validity of this test; it appears very

reasonable as long as the Cronbach's index is close to 0.8. In case of deletion the questions appear very important which gives an intra and inter items validity. In order to better evaluate the patients' condition, we had to calculate the total score by adding the 5 questions. Indeed, the average score is  $17.93 \pm 0.66$ ; with a minimum score of 5 and a maximum score of 29. However, 25% of the patients have a score lower than 14 and 25% have a score higher than 22.75. The distribution of the respondents according to the limit scores is shown in the table below. In fact, 27.4% of the patients are considered to be highly satisfied; 47.6% of the patients are considered to be at risk; they need to be monitored and 25% of the patients are in a serious pathological state; as long as they renounce their wishes against satisfaction. To calculate the Satisfaction score, note the degree of satisfaction expressed by the subject on each item (from 1, very dissatisfied to 6, very satisfied), and then calculate the total satisfaction score, S (sum of these scores) which ranges from 6 to 36. The mean satisfaction score is  $26.08 \pm 0.71$ , with a minimum score of 6 and a maximum score of 36. The median is 30: 25% have a satisfaction score less than 23; 25% have a score between 23 and 30 and 50% have a score more than 30; therefore, the definition of classes allows to rename the first category as pathological, the second category to watch and the last category are normal cases. In fact, 26% are suffering people; 69% to watch and only 5% are normal cases. In terms of statistical association between the disease state and socio-economic variables. The results are represented in the table 4. The analysis of the chi-square test of independence shows a significant link between satisfaction on the one hand and marital status, profession and type of illness on the other hand, with p values lower than 5%. In fact, of the pathological cases, 18 patients are single, 11 are civil servants and 12 suffer from respiratory diseases. 13 patients were between 30 and 40 years old, although the chi-square test did not show any significant difference.

Over the past decades, a paradigm shift has occurred in evaluating the outcomes of medical care. The focus of outcome assessment has changed from clinical indicators of disease to patients' health condition perception and treatment. The parameter (PRO) "patient-reported outcomes" was used to denote the inclusion of the perspective of patient in epidemiological and clinical research on services and the economics of individual health. [12,13]. The World Health Organization (WHO) [7], by defining health as physical, mental and social well-being, laid the foundation for the introduction of the concept of health-related quality of life (HRQoL) in medicine. HQoL reflects the subjective perception of health and is one of the core concepts of the field of PRO [14]. The development of the field of health-related quality of life in medicine has been stimulated not only by the growing recognition of the subjective factor, but also by the increasing prevalence of chronic diseases requiring long-term treatment and care [15-17] In this context, traditional medical indicators of treatment outcomes (such as symptoms or survival) have been questioned as to their relevance in capturing the health changes that matter to patients and the societies in which they live. Because quality of life assessment in medicine has advanced considerably over the past 30 years, it is now possible to assess the quality of these assessment tools and the benefits of incorporating them into research and practice, from individual treatment

decisions to health policy regulations at the national and international levels.

**Table 1:** Distribution of participants by nature of disease.

Disease	Number	Percentage (%)
Heart disease	<b>32</b>	<b>38,1</b>
Diabetes	<b>31</b>	<b>36,9</b>
Respiratory	<b>21</b>	<b>25,0</b>
Total	<b>84</b>	<b>100,0</b>

**Table 2:** Reliability of the test questions.

	Cronbach's Alpha when the item is deleted
Q1	0.689
Q2	0.760
Q3	0.689
Q4	0.793
Q5	0.743

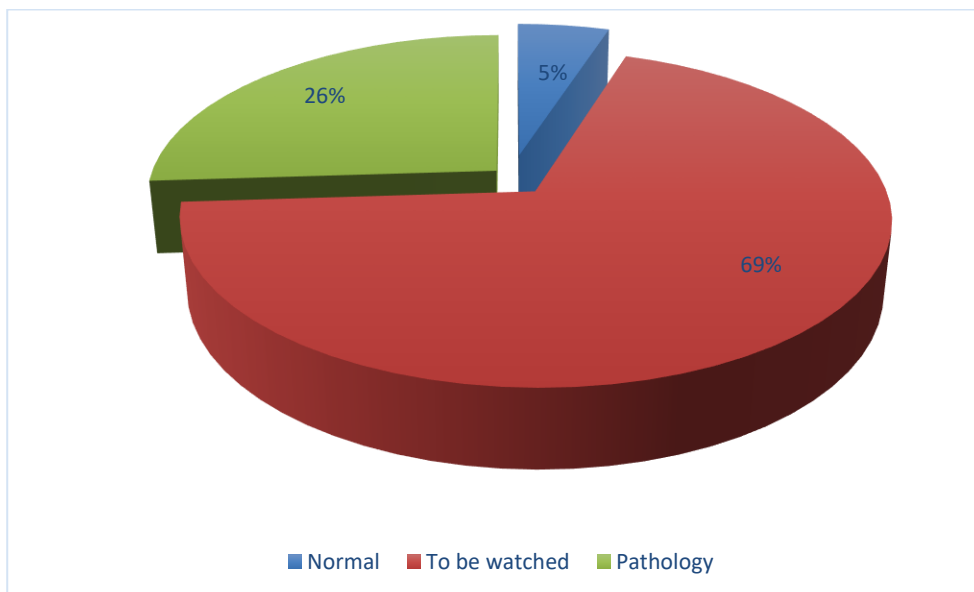
**Table 3:** Scores on the life satisfaction scale among participants.

	Number	Percentage (%)
< 14.18	23	27,4
14.18 to 22.75	40	47,6
>22.75	21	25,0
Total	84	100,0

**Table 4:** Distribution of satisfaction according to the studied variables.

		Satisfaction			Total	Chi-square	P-value
		Normal	To be watched	Pathologic			
Gender	Female	12	19	9	40	0,38	0,83
	Male	11	21	12	44		
Marital status	Married	10	5	3	18	26,72	0,000*
	Single	8	35	18	61		
	Divorced	5	0	0	5		
Profession	No	12	25	9	46	20,15	0,000*
	Student	8	1	1	10		
	Civil servant	3	14	11	28		
Type of disease	Cardiology	9	19	4	32	16,25	0,003*
	Diabetes	11	15	5	31		
	Respiratory	3	6	12	21		
Age	<30	5	4	2	11	12,85	0,12
	30-40	11	15	13	39		
	40-50	4	20	5	29		
	50-60	2	1	1	4		
	>60	1	0	0	1		
Total		23	40	21	84		

\*\*\*P-value <0.005 means the association between the two variables.



**Figures 1:** Distribution by average satisfaction score.

A disease that becomes chronic is no longer just the pathology of an organ, an organic function or an organic system, it is a systemic disease [18]. It also has psychosocial impacts such as fatigue, sleep disorders, anxiety, depression, repression of emotions, memory difficulties, attentional disorders and loss of self-esteem [19]. In our study, the self-esteem is very low. Since its early years, the field of quality of life has been confronted with the question of how to define and operationalize health-related quality of life, how to construct and evaluate assessment methods, how to implement these measures in research and clinical practice, and how to examine the utility of the information obtained.

In our study, we opted for a quantitative approach to assess the quality of life of patients, this is consistent with several studies [20,21], While early assessment approaches were based on interviews, questionnaires assessing relevant dimensions with multiple questions and defined response formats are now mainly used [22]. Following the general construction principles of test theory, dimensions are assessed via items grouped to represent a dimension or scale, so that the multidimensionality construct is adequately represented. According to the operational definition of health-related quality of life, the construct is represented by at least three main dimensions, namely physical, mental (emotional and cognitive) and social well-being. In addition, the behavioral or functional dimension regarding patients' ability to perform daily living roles is included. The dimensions or subscales provide summary scores that constitute a quality-of-life profile [23]. In our study, we found very good Cronbach coefficients. An association between quality of life and the nature of the disease have shown, this is in line with several scientific studies related to the quality of life of patients [24,25].

#### 4. Conclusions

These results show that there are differences between quality-of-life satisfaction scores and the nature of the disease. This explains that the nature of the pathology impacts the psychological state of the patients. To protect the psychological state of the patients, it was necessary to integrate psychologists at the level of hospitals and health centers, as well as the availability of care, whose objective was to improve the quality of life of the patients.

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