
ASSESSMENT QUALITY OF LIFE OF DIABETICS IN MOROCCO: ABOUT 140 CASES

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The prevalence of diabetes is increasing, from 6.4% in 2010 to 7.7% of the world's population in 2030.

In this study we are interested in measuring the physical, mental and social scores to assess the quality of life of Moroccan diabetics.

Cross-sectional study of 140 diabetic patients followed at the Mohamed V Military Instruction Hospital in Rabat from the first of November until the end of December 2019. The quality of life is analyzed with the SF 12 quality of life scale. We looked at the assessment of the physical, mental and social scores in diabetic patients. In terms of patient demographics, we analyzed age and sex, and for diabetes characteristics we looked at the type of diabetes and length of illness. To assess the physical quality of life score, we measured general health, physical pain, physical functioning and physical limitation, and to assess the mental and social score, we measured mental health, vitality, social functioning, and emotional limitations.

The average age was 56 ± 11.9 years with 65% of men. The mean time to progression of diabetes was 9.62 ± 7.12 years. Diabetes was type 2 in 92% of patients. The result showed a mediocre physical quality of life and a good psychological quality of life. Quality is related to age, sex, and length of illness.

Keywords: diabetes, quality of life, sex, age.

1, INTRODUCTION

Diabetes is a major public health problem. The World Health Organization (WHO) describes it as a growing epidemic on a global scale. Morocco is strongly affected by the disease; the prevalence rate is 12.6% for men against 12.3% for women. Diabetes affects all social environments. Its effects are manifested in everyday life, both physically, mentally and socially [1].

The global prevalence of diabetes has almost doubled since 1980, from 4.7% to 8.5% in the adult population. The WHO estimates that 422 million adults were living with diabetes in 2014 compared to 108 million in 1980. The prevalence of diabetes is increasing, from 6.4% in 2010 to 7.7% of the world's population in 2030.

These figures indicate an increase in associated risk factors such as overweight or obesity. Early diagnosis is the starting point for living well with diabetes.

The quality of life in relation to health (QVRS) measure is an essential complement to medical evaluation. In recent years, the measurement of the quality of life in the field of health is becoming widespread, while few studies have focused specifically on the emotional experience of diabetics.

2. PATIENTS AND METHODES

This is a cross-sectional study of 140 cases, our target population consisted of type 1 and 2 diabetic patients aged 20 years and over consultants at the Mohamed V Military Instruction Hospital in Rabat.

The data collection was done during the diabetology consultations at the Mohamed V Military Instruction Hospital in Rabat.

This study is based on a generic SF-12 quality of life questionnaire, a shortened version of SF-36 filled out by patients for two months from November 1st to the end of December 2019.

The quality of life is analyzed with the SF 12 quality of life scale (Short Form). We looked at the assessment of the physical, mental and social scores in diabetic patients. In terms of patient demographics, we analyzed age and sex, and for diabetes characteristics we looked at the type of diabetes and length of illness. To assess the physical quality of life score, we measured general health, physical pain, physical functioning and physical limitation, and to assess the mental and social score, we measured mental health, vitality, social functioning, and emotional limitations.

The 12 items of the questionnaire are coded, the analysis of this coding requires 2 recordings: the first record the ordinal values in a scale from 0 to 100. The second is a grouping of the 12 questions.

The higher the score in each area, the better the quality of life.

3. RESULTS

The assessment of the quality of life of type 1 and 2 diabetic patients is based on the analysis of data and characteristics of diabetic patients who consulted at the Rabat Military Hospital.

In this study, we looked at the evaluation of the mental and social and physical scores in diabetic patients.

Our sample consisted of 65% male with a sex ratio H / F = 1.86.

The results of the study show that the average age was 56 ± 12 years, with extremes ranging from 20 to 95 years.

Our study was based on both types of diabetes 1 (DID: insulin-dependent diabetes) and type 2 (DND: diabetes insulin dependent), type 2 representing 92% of the sample.

One hundred and forty diabetics responded to the generic SF-12 questionnaire. The questionnaire allowed us to calculate an average mental and social score of 60.11 ± 18.48 with a minimum score of 16.25 and a maximum score of 97.50. Sixty-three percent of subjects studied their mental health is excellent against those who have poor mental health that presents only 2.1%. The average score for mental health is 72.35 ± 15.80 . For emotional limitations, we have an average of 53.93 ± 48.75 . According to these results, 51% of diabetics were in very good emotional condition. Social activities (life and relationships with others) are quite good with an average of 56.97 ± 24.19 , the majority of patients have a good social health status, especially regarding relationships with others and with their families. The vitality score in the population is modest with an average of 59.14 with no difference between men and women with scores 59.3 and 58.8 respectively. The results of the descriptive analysis on the different measures of mental and social score are summarized in Table 1.

Table 1: Results of different measures of mental score, length of illness and age (n=140) .

Dimensions	Average	Standard deviation	Min	Max
Age	55,96	11,9	20	85
Lenght of illness	9,62	7,12	1	31
Mental Health	72,35	15,80	20	100
Social funtioning	56,93	48,75	0	100
Emotional limitation	53,17	49,26	0	100
Vitality	59,14	27,7	20	100
mental score	60,11	18,48	16,25	97,50

The comparative study of the mental score according to age shows that young people [20-45 [perceive their quality of mental and social life less than the elderly (Figure 1), this result can be explained by the fact that young people are more affected by type 1 diabetes, which further impairs the quality of life.

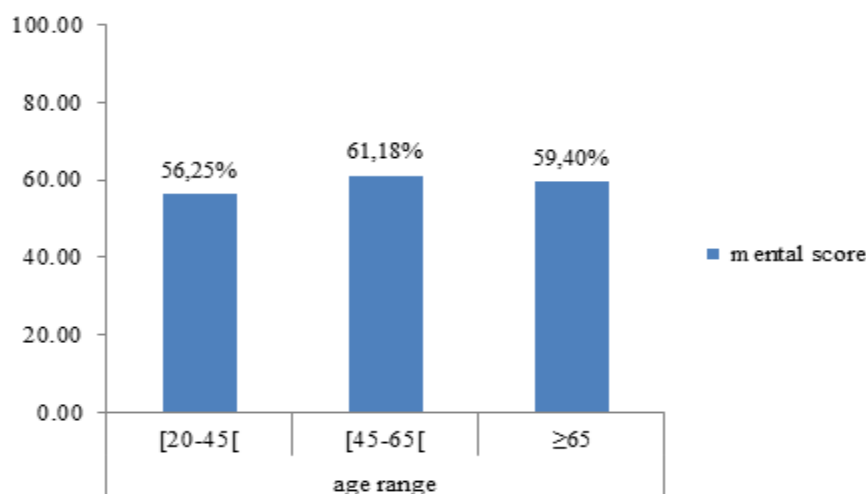


Fig. 1: Comparison of mental and social score by age range (n=140).

The comparative study of sex scores shows the existence of a difference between men and women. In general, men express a better quality of life compared to women for all age groups (Figure 2). The mental and social score of men is higher at 61.95 than that of women at 56.69, $p \leq 0.01$.

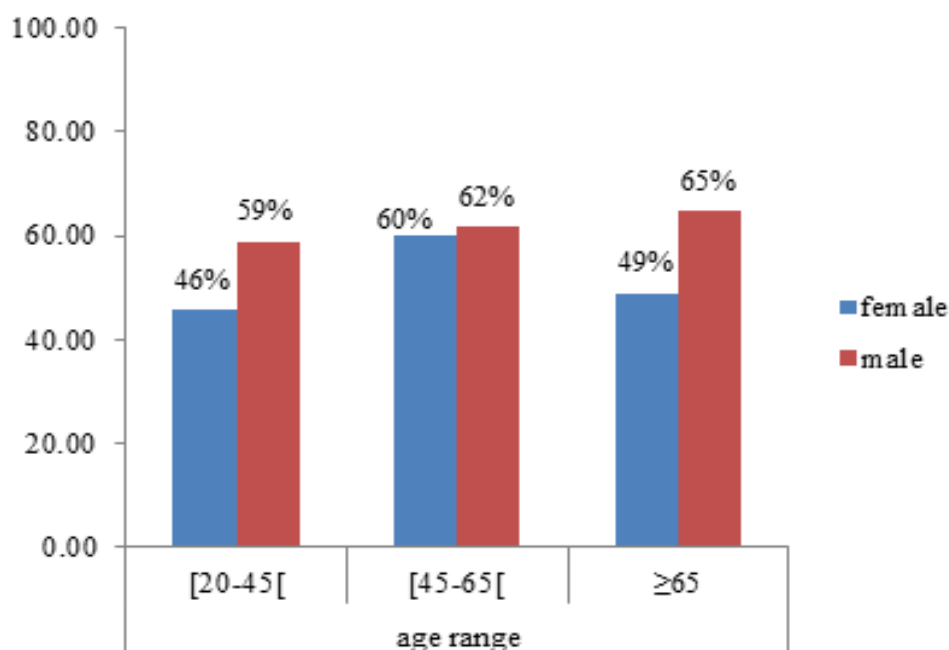


Fig. 2: Comparison of mental and social score by gender and age range (n=140).

Regarding the mental and social score, the score in type 1 diabetics was lower than in patients with type 2 diabetes with T1D scores: 56.70 and T2D: 60.40; This explains why patients with type 1 diabetes have poor mental health compared to patients with type 2 diabetes (Figure 3).

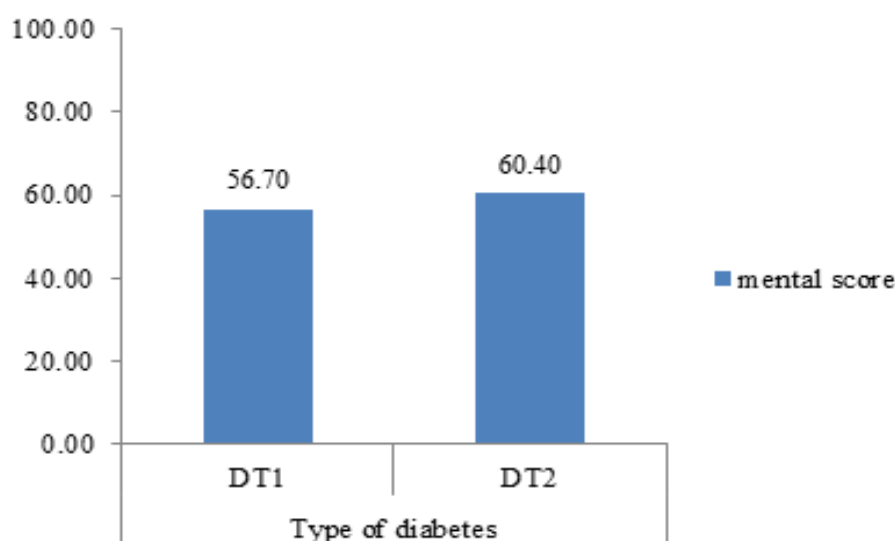


Fig. 3: Comparison of mental and social score by type of diabetes (n=140).

One hundred and forty diabetics responded to the generic SF-12 questionnaire. The questionnaire allowed us to calculate a physical summary score average of 52.66 with a minimum score of 6.25 and a maximum score of 100. Forty-seven percent of the subjects studied their general health is mediocre against those with excellent general health who present only 2%. The average score for general health is 47.35 ± 20.46 . For limitations due to physical condition, we have an average of 45.17 ± 49.26 . Based on these results, 44% of diabetics were in good physical condition. In addition, for the scores obtained for physical pain, we note that the majority of the population suffer significant physical pain with an average of 62.50% of the population. The results of the descriptive analysis of the different measures are summarized in Table 2.

Table 2: Results of different measures of physical score (n=140).

Dimensions	Average	Standard deviation	Min	Max
General health	40	20,46	0	100
Physical	63,21	35,41	0	100

functioning				
Physical limitation	45,17	49,26	0	100
Physical pain	62,50	27,7	0	100
Physical score	52,65	28,58	6,25	100

The comparative study (Figure 4) shows a decrease in physical activity with age. The first two age groups have high values (53, 43 and 53, 47), while people over 65 years have a lower score (49, 47), this difference in scores between categories of age is highly significant ($p \leq 0.01$).

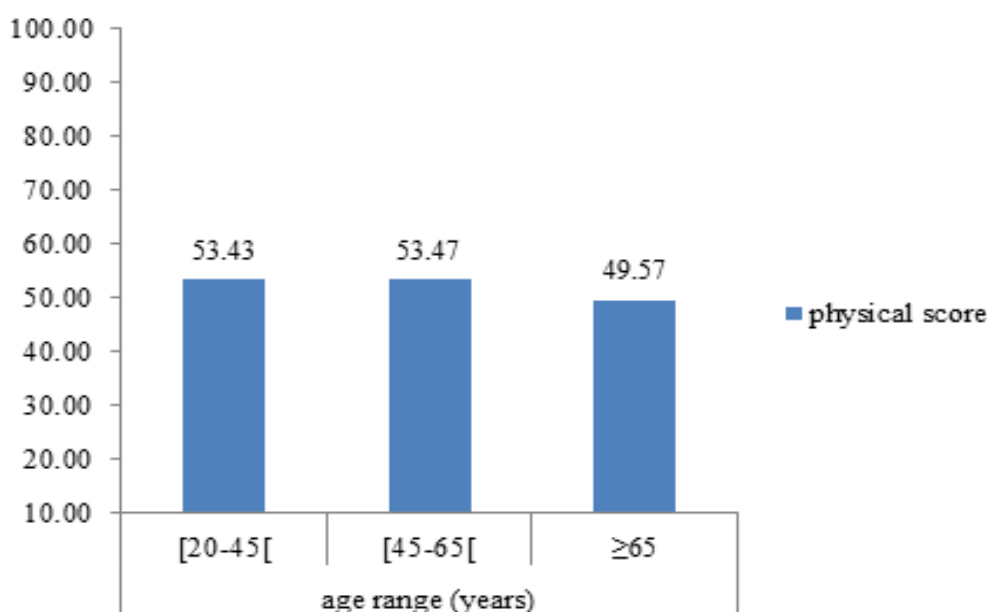


Fig. 4: Comparison of physical score by age group (n=140).

The comparative study of SF-12 scores by sex (Figure 5) shows the existence of a difference between men and women. In general, men express a better quality of life compared to women for the different dimensions measured ($p \leq 0.01$).

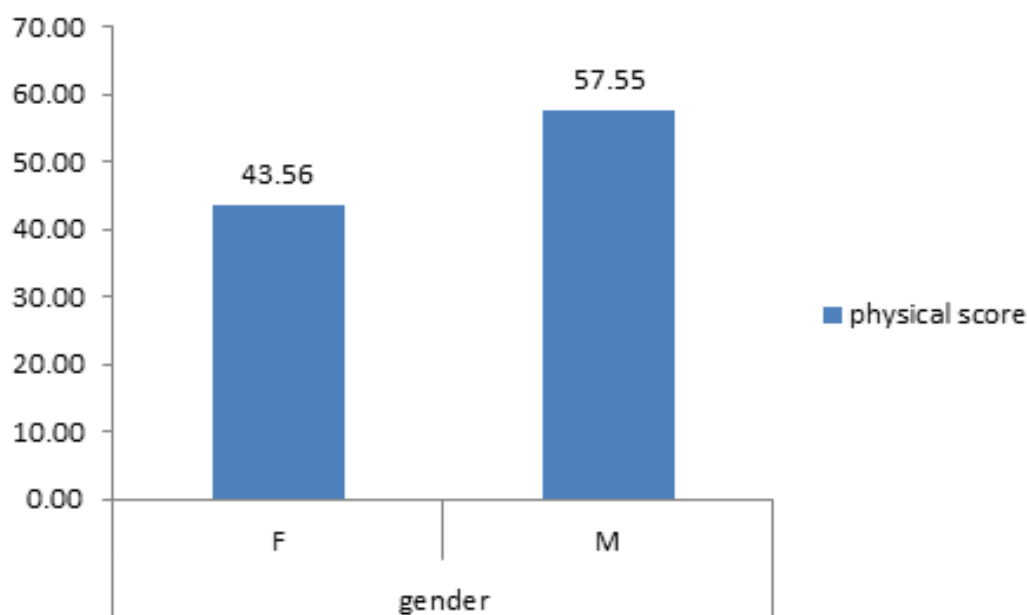


Fig. 5: Comparison of physical score by gender (n=140).

The comparison of the physical scores of the two types of diabetes involved in the DID and DND study, showed that the majority of patients with type 2 diabetes had a more or less better physical score than patients with type 1 diabetes with scores 52, 79 and 51.14 respectively, (Figure 6).

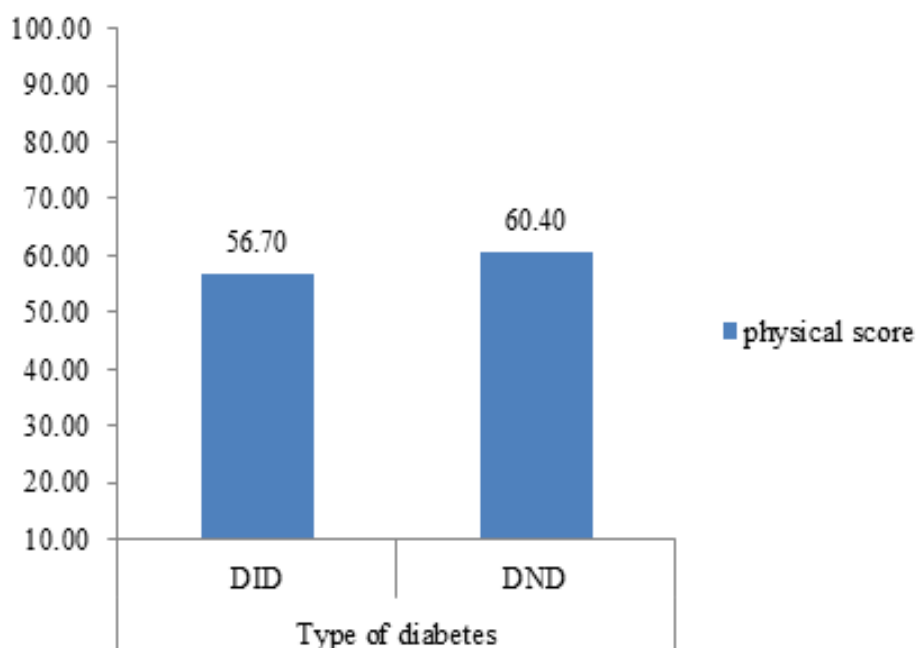


Fig. 6: Comparison of physical score by type of diabetes (n=140).

4, DISCUSSION

The quality of life related to health has become a very important element in the management of chronic diseases, particularly diabetes. We performed a cross-sectional work that aims to assess the quality of life of diabetic patients and to detect factors associated with their quality of life in order to compare them with data from the literature [2].

Many measurement tools have therefore been developed, the methodological difficulty is major since it is a question of obtaining a quantitative measure of a purely qualitative, subjective and very personal concept [3].

In general, the quality of psychic life in relation to health in our population is rather good. Patients with type 2 diabetes have a psychic score that is at least higher than that of patients with type 1 diabetes, as the latter seriously affects the quality of life of these patients and especially if the diabetes is old, this finding is identical to that reported by other studies [4].

The results of our study show a significant association between psychic quality of life and sex, women perceive poorly their quality of psychic life than men and that men over 65 have a good perception of the majority of domains. Measured for the mental and social score, these results are similar to those in the literature [1].

The scores corresponding to social functioning, emotional limitations, and vitality, dimensions mainly related to mental and social health are lower in women compared to men. This observation is identical to that reported by other studies. The psychic score was higher in men than women, with (67.69; 62).

The impact of diabetes was not limited to the emotional field, but affected especially relational life and leisure. There were globally few differences regarding the impact of diabetes, according to the type of diabetes, but the switch to insulin therapy was perceived as a penalty for a poor therapeutic compliance. These results encourage to better take into account psychosocial aspects of diabetes and to integrate this component in a more patient centered medicine [5].

Illness perception is associated with feelings of loss, constraints and restrictions, especially regarding food. Patients, especially those treated by insulin or insufficiently controlled, often expressed a negative emotional impact. They nevertheless could express positive feelings and exhibit a positive perception of insulin, especially those who were characterized by a satisfactory glycemic control [6; 7].

The DAWN2™ study has, among others; approach underlines the need for considering the care of a chronic disease like diabetes from a point of view not only biomedical, but also bio-psychosocial [8].

The results of our study are similar to those of the literature [10, 11]. Patients with type 2 diabetes have a physical score that is at least higher than that of patients with type 1 diabetes, as the latter seriously affects the quality of life of these patients and especially if diabetes is old, this finding is identical to that reported by other studies [12].

The most significant results from our study show that people over 65 have a poor perception of the majority of the measured domains, especially those related to physical health and relationships with others, these results are similar with those of literature [13, 14]. In the elderly, the decline in health, particularly physical, is attributed to the natural aging process, which is a fertile ground for the development of diseases whose effects worsen with age, often leading to comorbidities in addition to changes in social and professional life;

The youth class [20-45] have near-balanced physical health scores, which seems logical given their young age, is a better perception of their physical health.

The scores for physical functioning, physical limitations, and physical pain, dimensions mainly related to physical health are lower in women compared to men. This finding is identical to that reported by other studies [15, 16, 17], such as the ENTRED 2007-2010 study, which showed that the physical score was higher in men than in women (43 vs 38) respectively and that this physical score decreased with age. Being elderly, being a woman, having income deemed to be inadequate, altered the quality of life. Overall, the existence of diabetes complications was linked to an impairment of quality of life [18].

5, CONCLUSION

In conclusion, diabetes is a chronic condition that causes an impairment of the quality of life of patients who have it. This finding is identical to that reported in other countries [9].

The deterioration of quality of life worsens with age and length of illness. The young age of the patients, the male sex, the less old diabetes and balanced with simple hygienic-dietary measures, the absence of previous complications, a good follow-up, are associated with a better quality of diabetic life. This study is preliminary result of a more important investigation.

Conflict of interest: No conflict of interest

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