Evaluation of the quality of living of individuals with diabetes mellitus through the use of Whoqol-100.

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Abstract

Quality of life assessment is recognized as an important area of scientific knowledge due to its conception of health: satisfaction and well-being in the physical, psychic, socioeconomic and cultural spheres. The use of quality of life assessment tools allows a more objective and clear assessment of the global impact of chronic diseases, such as Diabetes Mellitus. Such an evaluation has the advantage of including subjective aspects that are not normally addressed by other evaluation criteria. Objectives: To verify if there are any gender differences in the quality of life of individuals with Type 2 Diabetes Mellitus. Materials and Methods: The WHOQOL-100 questionnaire (the World Health Organization quality of life assessment instrument) and clinical questionnaires were used to assess quality of life. 192 patients with Type 2 Diabetes Mellitus were interviewed at the UNIFESP Diabetes Center, equally divided between the sexes, between August 2013 and May 2014. Results: The WHOQOL-100 results showed that the scores of the domains (physical, psychological and psychological). , level of independence, social relations, environment and spiritual aspects) were higher in men than in women, and 18 of the 24 facets were higher in men. Conclusion: Men tend to have higher mean scores than women, both in the field and in the facet, suggesting that women with diabetes have a greater loss of quality of life than men. However, in the overall perception of study participants, overall quality of life and overall health perception were considered to have good quality of life in both sexes.

Introduction

The technological advance, since the beginning of the twentieth century, has created the expectation that the cure of diseases or efficient and definitive treatments would be a reality. Despite the progress of medicine, it is clear that some diseases are not curable [1]. Among these, we can mention Diabetes Mellitus (DM), a disease with a chronic evolution, causing deleterious effects to the organism, resulting in multidimensional complications and losses in patients' lives [2]. The burden of disease management, complex and expensive therapeutic regimens, dietary restrictions, as well as the need to inject insulin and blood and urine tests impair quality of life [3].

The quality of life derives from the individual and subjective evaluation of each person's life, taking into account their perception of their physical, emotional and social well-being [4].

The relationship between diabetes and quality of life (QOL) is important and relevant today, since the assessment of the individual's quality of life is recognized as an important area of scientific knowledge, since the concept of Quality of Life intervenes health: satisfaction and well-being. the physical environment. environment, psychic, socioeconomic and cultural. The use of QOL assessment instruments allows a more objective and clear assessment of the overall impact of chronic

diseases, such as DM in patients' lives. This evaluation has the advantage of including subjective aspects, usually not addressed by other evaluation criteria [5]. To date, the determinants of the quality of life of the individual with diabetes remain undefined, as they have a lower QOL level than individuals without diabetes. In this possible negative impact of DM on QoL, the aspects involved are not yet clearly known and it is known, however, that many variables can influence QoL in individuals with diabetes, such as DM type, insulin use, age, complications, social level, psychological factors, ethnicity, schooling and knowledge of the disease [6], although the basis of care for DM is self-perception and self-care, that is, the patient himself should monitor glycemic levels, diet carefully recommended dietary intake, participate in physical activities and adhere to medication to avoid complications and preserve good quality of life [7]. The daily tasks of these self-care activities can be complex, confusing and often demanding.

For people living with DM, disease management overload, comorbidities and complications negatively affect quality of life (QOL), and studies show that QOL in diabetic patients is substantially decreased compared to individuals without diabetes [8]. In particular, diabetic women tend to have worse QoL [9, 10] and DM is independently associated with lower health-related QoL among the elderly [11].

It is known that gender is a social factor directly implicated in health inequalities, both by social determinants and by subjective determinants and gender identities [12], and sexuality is a broad concept involving historical and cultural conceptions [13].

However, the literature on Diabetes Mellitus has focused essentially on gender differences in therapeutic adherence rather than on individuals' quality of life, neglecting gender as a determining factor in understanding the differences between men and women [14], since The relationship between gender and health and disease is related and cultural factors and therefore women would suffer due to factors such as stress and depressive symptoms, while men would be ill in the long term due to factors such as pressures at work and use of drugs (alcohol and cigarettes).

In this sense, the objective of the present study was to verify if there are differences of gender in the quality of life of individuals with Type 2 Diabetes Mellitus, using the WHOQOL-100 evaluation instrument.

Materials and Methods

This is a cross-sectional survey-type study conducted at the Diabetes Center of the Federal University of São Paulo (UNIFESP) from August 2013 to May 2014, with individuals with type 2 diabetes. The sample consisted of equal number of patients of each sex and the calculation of the sample size for comparison of proportions, taking into account a 95% confidence interval and a 10% error, was 96 individuals for both male and female.

Individuals were identified at the time of their scheduled appointment when they were invited to participate in the study. When they accepted and fulfilled the inclusion criteria (individuals with Type 2 Diabetes Mellitus, with more than one year of diagnosis of the disease, of both sexes, in the age group of 30 to 80 years, attended regularly in the Diabetes Center of the Federal University of São Paulo - UNIFESP, who accepted to participate in the research and were able to read and write) and exclusion (patients with cognitive deficits, hospitalizations in the last 3 months, large surgeries in the last 6 months and treatment with immunosuppressants) free and clarified - TCLE and answered questions from the following questionnaires applied by interviewer: clinical questionnaire 1 (sex, age, time of diagnosis, drugs in use and glycemic control); Clinical questionnaire 2 (data taken from patients' charts, such as type of diabetes, chronic complications, presence of comorbidities, laboratory tests performed during treatment, weight, height, body mass index (BMI), waist circumference and blood pressure.) and WHOQOL-100.

WHOQOL-100 is a universal quality-of-life evaluation tool developed by the World Health Organization (WHO) quality of life group and adapted into Portuguese by the WHOQOL group in Brazil of the Federal University of Rio Grande do Sul, which is based on the assumptions that quality of life is a subjective construct (perception of the individual in question), multidimensional and composed of positive and negative dimensions (WHO, 1998).

The WHOQOL-100 assesses quality of life in its general aspect and consists of one hundred questions pertaining to six domains: physical, psychological, level of independence, social relations, environment and spirituality / religiosity / personal beliefs. These domains are divided into 24 facets. Each facet is composed of four questions. In addition to the 24 specific facets, the instrument has a 25th series of general questions about quality of life. Responses to the WHOQOL-100 questions are given on a Likert scale. The questions are answered through four types of scales (depending on the content of the question): intensity, capacity, frequency and evaluation [16]. It is an instrument of self-evaluation and self-explanatory, the interviewer can read the question slowly when the respondent cannot understand the question. The values obtained in the Cronbach coefficient for the questions or domains show a satisfactory internal consistency.

Data analysis was performed using the SPSS statistical program, when comparisons were made between the quality of life scores with appropriate tests (t test) and for position descriptive analysis (mean) and variability standard deviation), with a significant value equal to or less than 0.05 (5%) as the data level and analysis of variance.

The research was submitted for analysis by the Research Ethics Committee of UNIFESP through the Brazilian Platform (Protocol No. 103,384), according to the norms of Resolution No. 196/96 of the National Health Council.

Results

The sample studied was composed of 192 individuals, distributed equally in sex.

Data were collected between April 2013 and May 2014, through clinical questionnaires and instruments to assess quality of life (WOOQOL-100).

The clinical data were evaluated in two questionnaires, where the clinical questionnaire 1 was applied directly to the volunteers and obtained information about sex, age, time of diagnosis, drugs in use and glycemic control. Clinical questionnaire 2 obtained data from patients' charts, such as type of diabetes, chronic complications, presence of comorbidities, laboratory tests performed during treatment, weight, height, body mass index (BMI), waist circumference, and blood pressure. The value of glycated hemoglobin A1c was used to evaluate glycemic control and considered the value of the test performed in the last three months. Good A1c values of less than 7% were considered with good glycemic control.

The subjects' ages ranged from 30 to 80 years, with a mean age of 61 years (± 11), with a mean of 60 years (± 10) and 62 years (± 11 years). The mean time to diagnosis of DM2 was 15 years (± 8).

Table 1 shows the distribution of participants according to gender and age group, and Table 2 shows the means and standard

Table 1. *Distribution of participants according to gender and age group.*

Age (years)	TOTAL	MALE	FEMALE
30-39	06 (3, 1%)	04 (66, 7%)	02 (33, 3%)
40-49	23 (12, 0%)	08 (34, 8%)	15 (65, 2%)
50-59	54 (28, 1%)	27 (50, 0%)	27 (50, 0%)
60-69	61 (31, 8%)	23 (37, 7%)	38 (62, 3%)
70 e mais	48 (25, 0%)	34 (70, 8%)	14 (29, 2%)

deviations of age, time of diagnosis, weight, height, BMI, waist circumference and some laboratory tests, by gender.

It was found that weight and height were significantly higher in men and higher BMI in women. The values of cholesterol fractions (HDL and LDL) were higher in women and diabetes control, as assessed by HbA1c, showed that women had worse control than men (p=0.003).

The most frequent comorbidities were systemic arterial hypertension (83.9%) and dyslipidemia (56.8%). The most frequent chronic complication of diabetes was retinopathy, which was present in 50.5% of the studied population, presented in Table 3.

Table 4 presents the means and standard deviations of the domain and facet scores of the study participants.

In the comparison of the differences between the sexes, only the "Environment" domain presented statistical significance, being greater in the male sex (14.19 vs.13.83, p=0.034), while, according to the facets, the differences were statistically 15.53

Table 2. *Averages and standard deviation in anthropometric and clinical characteristics of the subjects of the study.*

	TOTAL	MALE	FEMALE	VALUE
	n=192	n=96	n=96	p
Age (years)	61 ± 11	62 ± 11	60 ± 10	0,088
Diagnostic time (years)	15 ± 8	15 ± 8	15 ± 8	0,947
Weight (kg)	74.9 ± 14.8	78,5 ± 16,1	71,4 ± 12,6	**0,001***
Height (m)	1,61 ± 0,08	1,66 ± 0,07	1,55 ± 0,05	**0,000***
BMI (kg/cm²⁾	29,15 ± 7,3	27,96 ± 4,9	30,39 ± 8,9	**0,027***
Waist circumference (cm)	100 ± 13,0	101 ± 13,0	99 ± 13,0	0,368
Glycemia in fasting (mg/dL)	148 ± 64,0	144 ± 71,0	153 ± 56,0	0,335
HbA1c (%)	8 ± 1,0	7,9 ± 1,7	8,7 ± 1,8	**0,003***
Cholesterol- Total (mg/dL)	177 ± 144,0	179 ± 20,0	174 ± 41,0	0,821
HDL (mg/dL)	48 ± 15,0	45 ± 13,0	50 ± 16,0	**0,009***
LDL (mg/dL)	91 ± 36,0	83 ± 32,0	98 ± 37,0	**0,007***
Triglycerides (mg/dL)	140 ± 79,0	149 ± 93,0	132 ± 62,0	0,152

Table 3. *Frequency of chronic complications of diabetes and comorbidities, by gender.*

| Complications and Comorbities	TOTAL	MALE	FEMALE
	n=192	n=96	n=96
Nephropathy	69 (35, 9%)	43 (62, 3%)	26 (37, 7%)
Retinopathy	97 (50, 5%)	53 (54, 6%)	44 (45, 4%)
Neuropathy	65 (33, 9%)	38 (58, 5%)	27 (41, 5%)
Nephro, Retino, Neuropathy	16 (8, 3%)	12 (75, 0%)	4 (25, 0%)
Nephropathy and Retinopathy	26 (13, 5%)	16 (61, 5%)	10 (38, 5%)
Nephropathy and Neuropathy	9 (4, 7%)	06 (66, 7%)	03 (33, 3%)
Retinopathy and Neuropathy	17 (8, 9%)	09 (52, 9%)	08 (47, 1%)
Amputation	7 (3, 6%)	07 (100%)	---
Sexual dysfunction	10 (5, 2%)	10 (100%)	---
Gastrointestinal disorder	3 (1, 6%)	---	03 (100%)
Urinary incontinence	7 (3, 6%)	---	07 (100%)
Coronary heart disease	11 (5, 7%)	08 (72, 7%)	03 (27, 3%)
AVC	15 (7, 8%)	09 (60%)	06 (40%)
Arterial hypertension	161(83, 9%)	79 (49, 1%)	82 (50, 9%)
Peripheral arterial disease	2 (1, 0%)	01 (50%)	01 (50%)
Dyslipidemia	109 (56, 8%)	51 (46, 8%)	58 (53, 2%)
Others	73 (38, 0%)	33 (45, 2%)	40 (54, 8%)

Table 4. *Means and standard deviations of domain and facet scores of WOQOL-100, by gender.*

| DOMAIN	Average	Male	Female	VALUE p
Physicist	13, 02 ± 2, 56	13, 33 ± 2, 72	12, 71 ± 2, 36	0, 089
Psychological	14, 36 ± 1, 95	14, 63 ± 1, 80	14, 09 ± 2, 06	0, 054
Level of Independence	13, 91 ± 2, 45	13, 96 ± 2, 55	13, 86 ± 2, 35	0, 786
Social relationships	14, 18 ± 2, 45	14, 29 ± 2, 41	14, 07 ± 2, 50	0, 532
Environment	14, 01 ± 1, 17	14, 19 ± 1, 13	13, 83 ± 1, 18	0, 034*
Spiritual Aspects/ Religion/Personal Beliefs	16, 69 ± 3, 18	16, 84 ± 2, 96	16, 54 ± 3, 39	0, 512
FACET	**Average**	**Male**	**Female**	**VALUE p**
Pain and discomfort	11, 53 ± 3, 69	11, 14 ± 3, 91	11, 93 ± 3, 42	0, 144
Energy and fatigue	12, 46 ± 2, 62	12, 57 ± 2, 70	12, 34 ± 2, 55	0, 546
Sleep and rest	14, 12 ± 3, 59	14, 56 ± 3, 55	13, 68 ± 3, 59	0, 087
Positive feelings	14, 38 ± 2, 55	14, 40 ± 2, 59	14, 35 ± 2, 52	0, 892
Thinking, learning, memory and concentration	14, 78 ± 2, 38	14, 89 ± 2, 36	14, 67 ± 2, 42	0, 526
Self esteem	14, 83 ± 2, 34	14, 98 ± 2, 30	14, 68 ± 2, 38	0, 372
Body image and appearance	15, 05 ± 3, 27	15, 53 ± 2, 98	14, 56 ± 3, 48	0, 040*
Negative feelings	11, 19 ± 3, 43	10, 60 ± 3, 28	11, 77 ± 3, 50	0, 018*
Mobility	15, 01 ± 3, 38	15, 06 ± 3, 51	14, 96 ± 3, 27	0, 832
Activities of daily living	14, 59 ± 2, 75	14, 43 ± 2, 85	14, 75 ± 2, 66	0, 418
Dependence on medication or treatments	12, 55 ± 3, 61	12, 43 ± 3, 56	12, 67 ± 3, 68	0, 647
Work capacity	14, 58 ± 3, 18	14, 76 ± 3, 49	14, 40 ± 2, 84	0, 428
Personal relationships	15, 34 ± 2, 92	15, 41 ± 2, 85	15, 28 ± 2, 99	0, 767
Social support	14, 71 ± 3, 03	14, 89 ± 2, 97	14, 53 ± 3, 09	0, 419
Sexual activity	12, 49 ± 3, 29	12, 58 ± 3, 29	12, 40 ± 3, 30	0, 694
Physical security and protection	12, 38 ± 1, 57	12, 48 ± 1, 51	12, 27 ± 1, 63	0, 359
Home environment	15, 10 ± 2, 55	15, 52 ± 2, 62	14, 69 ± 2, 42	0, 023*
Financial resources	13, 31 ± 2, 70	13, 44 ± 2, 67	13, 18 ± 2, 73	0, 505
Health and social are: availability and quality	14, 65 ± 1, 94	14, 79 ± 1, 91	14, 51 ± 1, 96	0, 315
Opportunities to acquire new information and skills	15, 20 ± 1, 91	15, 42 ± 1, 93	14, 98 ± 1, 87	0, 112
Participation in, and recreation / leisure opportunities	13, 40 ± 1, 88	13, 59 ± 1, 83	13, 20 ± 1, 92	0, 146
Physical environment: (pollution/noise/traffic/ climate)	13, 05 ± 1, 90	13, 05 ± 1, 82	13, 05 ± 1, 98	1, 000
Transport	14, 98 ± 2, 59	15, 20 ± 2, 46	14, 77 ± 2, 72	0, 255
Quality of Life from the point of view of the	14, 08 ± 2, 13	14, 07 ± 2, 11	14, 09 ± 2, 16	0, 946

vs. 14.56, p=0.040), "Negative Feelings" higher in females (11.77 vs 10.60, p=0.018), and "Home Environment", which was also higher in males (15.52 vs. 14.60, p=0.023).

Graphs 1 and 2 show the domain and facet scores for men and women, after being converted on a scale from 0 to 100, in which the higher the score, the better the quality of life of the individual, being accepted a cut bridge of 70, according to FLECK et al.

According to the charts, only the domain "Spiritual Aspects/ Religion/Personal Beliefs" had a score higher than 70 for men and women. In terms of the WHOQOL-100 facets for men (Table 2), the scores were higher than 70 in: "Spirituality/ Religion/Personal Beliefs", "Opportunities to Acquire New Information", "Home Environment", "Personal relationships"
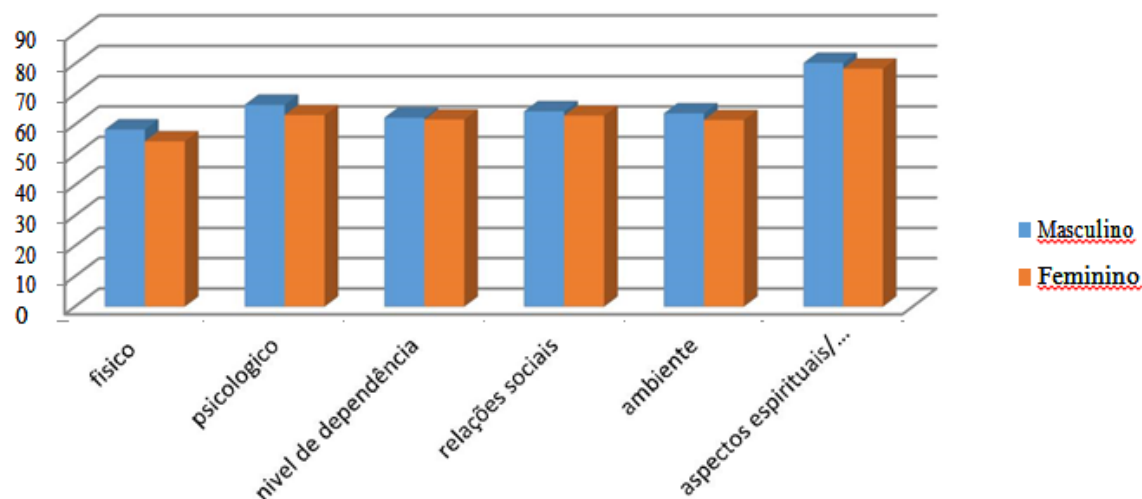
Graph 1. *Score converted into WOQOL-100 domains, for both male and female genders.*
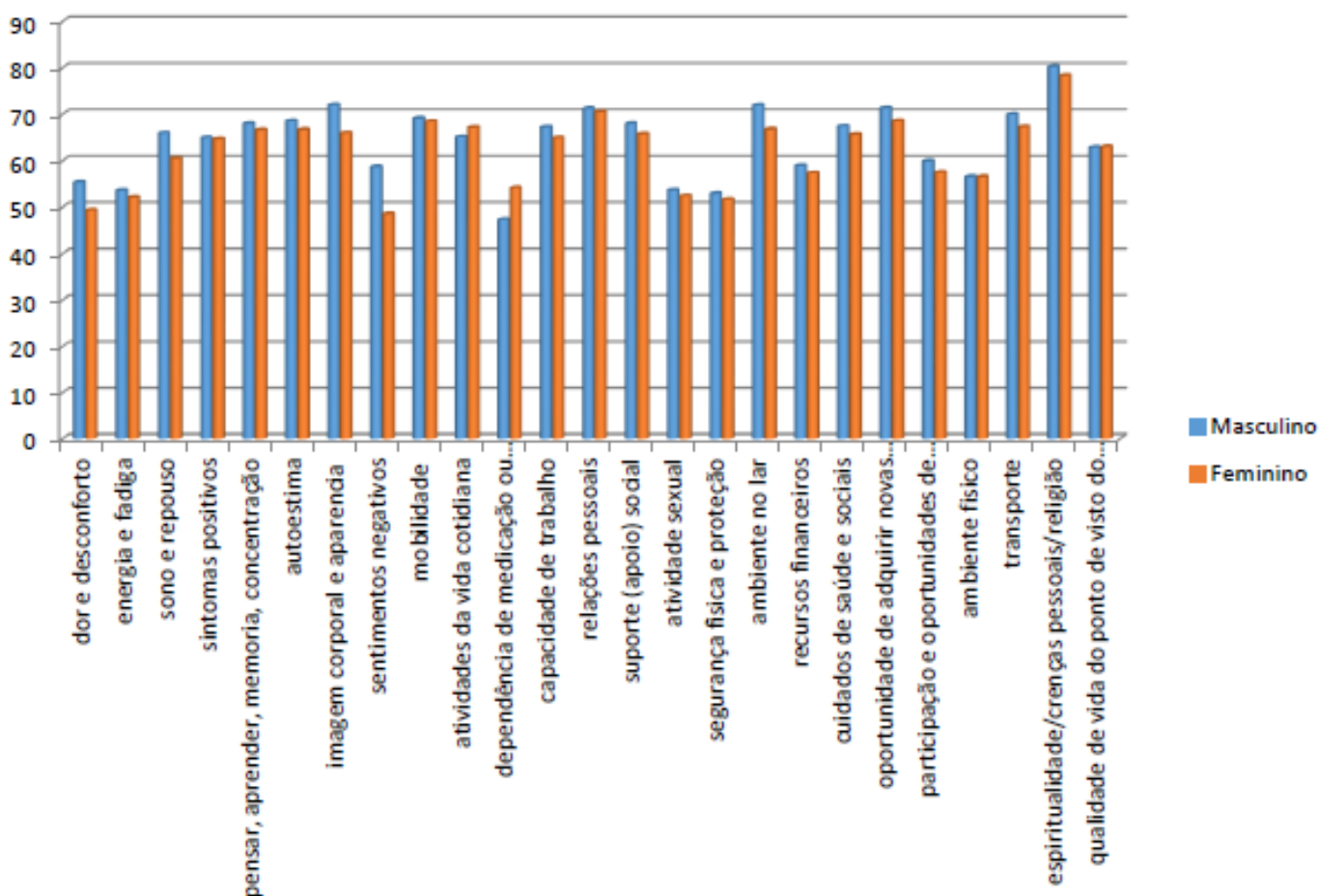
Graph 2. *Converted score of the WOQOL-100 facets for the male and female genders.*

and "Body Image and Appearance". In women, facets with a score greater than 70 (Graph 2) were only "Spirituality/Religion/Personal Beliefs" and "Personal Relationships".

Discussion

In this study, the individuals' ages ranged from 30 to 80 years, with an overall mean of 61 years (± 11). The frequency of women (62.3%) was higher in the age group of 60-69 years and in those (70.8%), in the age groups of 60 to 69 years and

70 years or more, reflecting the characteristics of patients with DM2 attended at the Diabetes Center of UNIFESP, which is a referral service, serves patients with a longer time of disease evolution and with frequent complications, in line with the data obtained by Bernini et al when assessing the impact of diabetes mellitus on quality (19.9%) men and 39 (66.1%) women, aged 63.5 ± 10 years. Bernini et al. [15] and Correa's [16] studies et al who revealed that women lead the number of diabetes cases. The female prevalence may be related to the tendency of women

to be more present in health services, favoring the diagnosis of the disease.

DM2 is the most common type, around 90% to 95%, and whose prevalence is increasing exponentially, acquiring epidemic characteristics in several countries. The most important factors that affect the QoL of these patients are age, sedentary lifestyle and obesity [4]. Obesity in the study measured by BMI was higher in women than in men. Excess weight negatively affects physical health-related quality of life (HRQoL) (physical pain, physical functioning, general health, and limitations due to physical health), but not health itself, because physical health stems from factors associated with weight such as diabetes and osteoarthritis, having a greater impact on this association of HRQoL than on emotional/psychological factors. The results of this study also show that women present worse glycemic control and BMI than men because they feel the disease as an extra weight [17], in addition to the fact that the value of glycated hemoglobin and obesity suggest, as expected [16], that patients referred to specialized treatment centers have greater difficulty in maintaining metabolic control, which justifies a worse perception of quality of life by this group.

Type 2 diabetes mellitus (DM2) is a chronic disorder with morbidity and mortality that limits quality of life due to complications, since it is a public health problem on the rise, generating economic, social and psychological consequences, as well as a reduction the quality of life of patients and their families [18], including the depression. Depression or the presence of associated complications, in addition to concomitant diseases, have a strong impact on the QoL of these patients, and 20% to 30% of patients with diabetes have depression. It is known that depression has a harmful impact on glycemic control and, in turn, poorly controlled diabetes intensifies depressive symptoms [4], and have a potentially significant impact on QoL, since the higher the number of complications, the worse the QoL is patient [19].

With the advancement of the age and time of the diagnosis of DM, the number of complications and incapacities increases, leading to a decrease in the autonomy that influences quality of life [20]. Because it is a progressive disease, affected individuals tend to deteriorate their health status over time, when complications arising from poor glycemic control begin to appear, which directly affects quality of life (QOL) and interferes in the expectation of this [4].

Individuals with DM are at risk of developing damage, dysfunction and failure of various organs, especially in the eyes, kidneys, nerves, heart and blood vessels [21].

In general, studies already performed suggest that the presence of chronic complications of DM is associated with a significant decrease in the quality of life of individuals with DM, and the quality of life decreases as the number of chronic complications increases [22].

The long-term complications of DM include retinopathy, with potential loss of vision, and may even cause blindness; nephropathy, which can lead to kidney failure or even kidney failure; peripheral neuropathy, with risk of lower limb ulcers, amputations and Charcot articulation [20]. Cardiovascular complications have an increased incidence in patients with DM,

such as angina, acute myocardial infarction, stroke, peripheral arterial disease, and congestive heart failure. In these patients, high blood pressure, elevated blood cholesterol and glucose levels, and other risk factors contribute to an increased risk of cardiovascular complications [22]. Our findings are in agreement with the literature, since 50.7% of the individuals evaluated presented retinopathy, 35.9% nephropathy, 33.9% neuropathy, 83.0% hypertension and 56.8% dyslipidemia, both retinopathy, nephropathy and neuropathy were more prevalent in males and hypertension and female dyslipidemia.

In this context, quality of life reflects individuals' perception that their needs are being met, or that they are being denied opportunities to achieve happiness and self-fulfillment, regardless of their physical or mental state social and economic conditions.

The WHOQOL-100 instrument is composed of six domains: physical, psychological, level of independence, social relations, environment and spirituality/religiosity/personal beliefs, and these domains are divided into 24 facets.

Dozens of these areas, stratified by sex, were higher in males than females. Of the 24 facets analyzed, only the facet "physical environment" was equal in both sexes.

Men presented higher scores for "energy and fatigue", "sleep and rest", "positive feelings", "thinking, learning, memory and concentration", "self-esteem", "body image and appearance", "Capacity for work", "personal relationships", "social support", "sexual activity", "security and physical protection", "domestic environment", "financial resources", "medical care", "recreation and leisure", "transportation".

The facets that women presented higher scores were "pain and discomfort", "negative feelings", "activities of daily living" and "drug addiction or treatment", as chronic diseases are more likely to limit daily activities due to physical symptoms, such as pain and discomfort, which may decrease the functional capacity of the individual and negatively reflect on his QOL, especially in the physical domain. Similarly, in the psychological domain, the limitations imposed by the chronic disease impact on the mental health, the perception about the feelings and the self-image of the individual, which can significantly reduce their QoL [16].

Overall, men have higher mean scores than women, both domains and facets, which could suggest that women with diabetes have a greater loss of quality of life than men. This can be explained by the maintenance of satisfactory metabolic control to guarantee to the diabetic a reduction in the risk of these complications and consequently in the quality of life, since the women attend more the health services, and therefore, they are more likely to have a worse quality of life [23].

However, the WHOQOL-100 has a facet that is not inserted in any domain, the "Global quality of life and general health perception" facet [24]. This aspect addresses a self-assessment of the quality of life, where the respondent evaluates satisfaction with their life, health and quality of life [25], making it clear that the population studied, regardless of gender, agrees with their point of view, with good quality of life, contrary to the findings of Almeida-Brasil et al., who presented that the health

conditions of people with chronic diseases, mainly diabetes, were associated with a worse overall QoL [26].

When we converted the WHOQOL-100 scores on a scale of 0 to 100, where a cut-off point of 70 is accepted, we observed that the domain "Spiritual Aspects/Religion/Personal Beliefs" was the only domain that presented scores above 70 points in both sexes.

Regarding the WHOQOL-100 converted face scores, the scores were higher than 70 in: "Spirituality/Religion/Personal Beliefs", "Opportunities to Acquire New Information", "Home Environment", "Personal Relationships" and "Body Image and Appearance "for men and" Spirituality/Religion/Personal Beliefs "and" Personal Relationships "for women, evidencing the importance of these items in people's quality of life, a fact widely described in the literature [27,28]. Colombo and Belentani [29] agreed with our study, as 59.1% of their respondents were satisfied with their lives, although some aspects of the disease were cited as "disruptive" to their quality of life, such as limitations in work and home activities, recreation, and leisure, physical limitations, self-image disorders, among others.

The present study has some limitations. Because it is a cross-sectional study, inferences are made to causal factors, without, however, establishing a temporal relationship, and the application of the WHOQOL-100 instrument evaluates the quality of life in a general way and does not specifically target individuals with diabetes, as well as being broad and including not only the individual clinical practice, but also the evaluation of the effectiveness of treatments and the functioning of health services, among other variables, besides the difficulty of immediate understanding in relation to the response categories of certain items of the instrument by some participants, and it is necessary to reread the questions and explain to them more clearly.

Conclusion

This study contributed to point out the factors that affect the quality of life of patients with type 2 diabetes treated at a specialized center for treatment.

With this study, it can be concluded that domain V (Physical security and protection, Home environment, Financial resources, Health and social assistance: availability and quality, Opportunities to acquire new information and skills, Participation and opportunities for recreation/physical environment and transportation) was the only one in which men presented higher scores than women. Among the facets that understand it, the atmosphere at home was also greater in men.

In men, mean body/facet image scores were higher and negative feelings were higher in women, showing that higher scores indicate a worsening of the quality of life observed in individuals with neuropathy, especially in men.

It is recommended that further studies be done in relation to diabetes, quality of life and gender in order to make more evident the influence of gender on the aspects of QoL, since the literature in this sense is still scarce.

Conflict of Interests

The authors declare that there are no conflicts of scientific interest in this article.

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