Calidad de vida de una persona adulta y diabética: estudio de caso

Quality of life of an adult and diabetic person: case study

Qualidade de vida de um adulto e diabético: estudo de caso

Jaqueline Guadalupe Guerrero Ceh
Universidad Autónoma de Campeche, México
jgguerre@uacam.mx
https://orcid.org/0000-0002-2913-1309

Ana Rosa Can Valle
Universidad Autónoma de Campeche, México
anarocan@uacam.mx
https://orcid.org/0000-0002-6849-9624

Angelica Alejandra Euan Cab
Universidad Autónoma de Campeche, México
al048829@ucam.mx
https://orcid.org/0000-0003-2721-2970

Resumen

Introducción: La diabetes es una enfermedad no transmisible que crece a pasos importantes a nivel mundial. De hecho, se estima que en el mundo existen alrededor de 425 millones de personas que sufren este padecimiento, de las cuales 12 millones viven en México, lo que lo convierte en el quinto país del orbe con mayor incidencia de esta enfermedad. El **objetivo** de este trabajo es determinar el nivel de calidad de vida que tiene una persona diabética. **Hipótesis**: La persona diabética tiene una calidad de vida poco satisfactoria, a pesar del conocimiento de los riesgos de su enfermedad proporcionados mediante un programa de intervención. **Aspectos metodológicos**: Estudio con enfoque cuantitativo, de alcance descriptivo, con diseño experimental y estudio de caso. Los instrumentos fueron los siguientes: 1) cuestionario para el conocimiento de la diabetes

mellitus, 2) cuestionario IMEVID, 3) escala para medir la adherencia terapéutica y 4) escala de calidad de vida WHOQOL-BREF. Estos se aplicaron tanto en la primera sesión (pretest) como en la última (postest). Tratamiento: en diez sesiones se trabajó de forma personalizada se integraron actividades de toma de presión, glucosa y peso; los temas que se desarrollaron fueron cuatro: conociendo la enfermedad, motivación, actividad física y alimentación saludable. **Resultados**: Los cambios en el sujeto de estudio fueron los siguientes: 18.18 % en el instrumento uno, 1 % en el instrumento dos, 23.08 % en el instrumento tres y 3.7 % en el instrumento cuatro. En síntesis, se evidenciaron cambios poco significativos, por lo que se acepta la hipótesis planteada.

Palabras clave: diabetes, calidad de vida, persona adulta.

Abstract

Introduction: Diabetes is a noncommunicable disease that grows at important steps worldwide. In fact, it is estimated that there are around 425 million people in the world suffering from this disease, of which 12 million live in Mexico, which makes it the fifth country in the world with the highest incidence of this disease. The objective of this work is to determine the level of quality of life that a diabetic person has. Hypothesis: The diabetic person has an unsatisfactory quality of life, despite knowledge of the risks of his illness provided by an intervention program. Methodological aspects: Study with quantitative approach, descriptive scope, with experimental design and case study. The instruments were the following: 1) questionnaire for the knowledge of diabetes mellitus, 2) IMEVID questionnaire, 3) scale to measure therapeutic adherence and 4) quality of life scale WHOQOL-BREF. These were applied in the first session (pretest) as well as in the last (posttest). Treatment: in ten sessions we worked in a personalized way, integrating blood pressure, glucose and weight activities; The topics that developed were four: knowing the disease, motivation, physical activity and healthy eating. Results: The changes in the study subject were the following: 18.18% in instrument one, 1% in instrument two, 23.08% in instrument three and 3.7% in instrument four. In summary, little significant changes were evidenced, so the hypothesis is accepted.

Keywords: diabetes, quality of life, adult person.

Resumo

Introdução: Diabetes é uma doença não transmissível que cresce em etapas importantes em todo o mundo. Na verdade, estima-se que existam cerca de 425 milhões de pessoas que sofrem desta doença, dos quais 12 milhões vivem no México, tornando-se o quinto país do mundo com maior incidência desta doença no mundo. O objetivo deste trabalho é determinar o nível de qualidade de vida que uma pessoa diabética tem. Hipótese: O diabético tem uma qualidade de vida insatisfatória, apesar do conhecimento dos riscos de sua doença proporcionado por um programa de intervenção. Aspectos metodológicos: Estudo com abordagem quantitativa, escopo descritivo, com delineamento experimental e estudo de caso. Os instrumentos foram os seguintes: 1) questionário para o conhecimento do diabetes mellitus, 2) questionário IMEVID, 3) escala para medir a adesão terapêutica e 4) escala de qualidade de vida do WHOQOL-BREF. Estes foram aplicados na primeira sessão (pré-teste) e no último (pós-teste). Tratamento: em dez sessões trabalhamos de forma personalizada, integrando as atividades de pressão arterial, glicemia e peso; Os tópicos que se desenvolveram foram quatro: conhecer a doença, motivação, atividade física e alimentação saudável. Resultados: As alterações no sujeito do estudo foram as seguintes: 18,18% no instrumento um, 1% no instrumento dois, 23,08% no instrumento três e 3,7% no instrumento quatro. Em resumo, poucas mudanças significativas foram evidenciadas, então a hipótese é aceita.

Palavras-chave: diabetes, qualidade de vida, pessoa adulta.

Introduction

Diabetes is a noncommunicable disease that is growing at an important rate worldwide, and whose criteria for diagnosing it were first developed by the National Diabetes Data Group in 1979 and adopted by the World Health Organization (WHO) and the American Diabetes Association (ADA) in different reports. In this regard, Benzadón, Forti and Sinay (2014) explain the following:

The criteria were a plasma glucose concentration = 200 mg / dL associated with symptoms of diabetes in a single occasion, or have a fasting plasma glucose (GPA) = 140 mg / dl. These values were originally chosen because of the future risk of developing symptoms (párr. 6).

According to the International Diabetes Federation (2017), it is estimated that there are around 425 million people in the world suffering from this disease, of which 12 million live in Mexico, which makes it the fifth country in the world with the highest incidence of this disease. In fact, in 2014 the Ministry of the Interior published a report that indicated that the number of deaths due to mean arterial pressure had risen to 404,439 due to three main causes: "diabetes mellitus (17.15%), acute myocardial infarction (15.23%) and chronic obstructive pulmonary disease (4.62%) "(p.24). These figures, logically, are alarming for Mexicans, especially if they take into account the observations of the WHO (2016), an institution that has indicated that "in the last decade the prevalence of diabetes has increased more rapidly in the countries of low and medium income than in high income "(p.2).

Uncontrolled diabetes has severe complications for the patient, among the most dramatic and shocking are blindness and the loss of a limb (in its initial stages is known as diabetic foot), which can be aggravated in the case of women:

> During pregnancy, poorly controlled diabetes increases the risk of maternal and fetal complications. Diabetes is the ninth leading cause of death in women worldwide, causing 2.1 million deaths per year. Women with type 2 diabetes are 10 times more likely to have heart disease and have a significantly higher risk of depression than men. Worldwide, there are more deaths attributable to diabetes in women than men (Nishtar, 2017, p. 4).

For this reason, some of the main initiatives that have been created at the national and international level to prevent and address the effects of this disease are described below.

Developing

Internationally, we can mention the American Diabetes Association (ADA) (sf), which offers on its website the following eight services of objective guidance for the prevention and control of this disease: 1) Are you at risk ?, 2) Basic information on diabetes, 3) Living with diabetes, 4) Food and physical activity, 5) In my community, 6) Defend your rights, 7) Research and practice, and 8) Ways to contribute. This association proposes to prevent type 2 diabetes to acquire a healthy lifestyle through two basic actions: healthy eating and physical activity.

In Mexico, civil associations have emerged that have sought to develop activities to improve the quality of life of people with diabetes. The first of these is the Mexican Diabetes Association in Mexico City (AMD) (s.f.), which not only collaborates with families of patients with diabetes, but also promotes outreach activities through workshops and diploma courses. Another institution is the Mexican Diabetes Federation (FMD) (s.f.), which also focuses on the issue of prevention:

> By raising awareness in people in general about this disease, it allows locating undiagnosed cases and achieving greater support for those who suffer from it, as it strengthens understanding about it. On the other hand, the early orientation of patients allows in turn to decrease the probability of the appearance of early or late complications of this condition (párr. 2).

For these two institutions, as can be inferred, the main element to combat diabetes is in the knowledge of its causes and consequences; However, it is worth noting that the information generated by these organizations is not usually known by the population in general and by those who work in the health area, hence the need for greater dissemination of their scope.

On the other hand, it also highlights the case of the official Mexican standard NOM-015-SSA2-2010 (Ministry of Health, 2009), which has emerged with the purpose of preventing, treating and controlling diabetes mellitus (DM). In the introduction section of this document, it is stated that this disease is conceived as follows:

DM is a complex condition that involves a series of situations that compromise control in patients, which favors the development of complications, with consequent disorders in the quality of life, premature deaths and increased costs of care and fees. of hospitalization. Like other countries. (párr. 5).

In other words, diabetes is a disease that has a high impact not only on the patient's life, but also in health institutions, as it causes the number of hospitalizations and related cases to rise, which is why it is important that Patients and health workers work jointly to reduce the incidence of this condition, avoid complications and reduce their mortality levels. For this, the risk factors indicated in point 8.1.4 of this NOM must be taken into account:

Overweight and obesity, sedentary lifestyle, first degree relatives with diabetes,> 45 years of age, women with a history of macrosomic products (> 4 kg) and / or with obstetric history of gestational diabetes, women with a history of polycystic ovaries; Likewise, people with hypertension (> 140/90), dyslipidemias (HDL cholesterol <40 mg / dl, triglycerides> 250 mg / dl), and patients with cardiovascular diseases (ischemic heart disease) are considered within this group. , cerebral vascular insufficiency, or arterial insufficiency of lower limbs) and with a history of psychiatric illnesses with the use of antipsychotics (Secretaría de Salud, 2009, párr. 17).

On the other hand, in point 3.55, in the cited standard, a definition is presented referring to what health promotion implies:

Process that allows to strengthen the knowledge, skills and attitudes of people to participate co-responsibly in the care of their health and to opt for healthy lifestyles, facilitating the achievement and conservation of an adequate state of individual and collective health through participation activities social, educational communication and health education.

Similarly, point 11.5.1 of this standard defines the non-pharmacological treatment for this disease: In this regard, it is explained that "it is the basis for the treatment of patients with prediabetes and diabetes and consists of a feeding plan, control of weight and physical activity supported in a structured program of therapeutic education ". Now, although it is true that this disease deteriorates different organs of the individual (which is why pharmacological treatments must be used), it must also be noted that the emotional part of people is affected, as evidenced in the following reports.

Diabetes and depression

In the review of the literature, several studies were found that link diabetes with depression, which are described below. For example, Pineda, N .; Bermúdez, V .; Cano, C. (2004) found that "in diabetic patients with a certain frequency there is depression of varying severity, both in the period of grief that accompanies knowledge of the diagnosis, and by the changes in habits involved in the management of the disease. "(Paragraph 5). In fact, the diagnosis of diabetes has a very strong impact on people, who feel that their life changes for the worse, that is why depression becomes a constant not only for them, but also for their relatives.

Another study found was that of Williams et al. (2004), who worked for 12 months with 417 people over 60 years of age around educational issues related to the self-care of the diabetic patient and the reduction of depression. The results of this work show that although these activities managed to slightly decrease the mood of the patients, the glucose levels were maintained because they had good glycemic control from the beginning.

In agreement with this work, is the one developed by Rivas-Acuña et al. (2011), who explain that the attention to the diabetic patient must include the biopsychosocial dimensions. In this regard, they point out the following:

It was observed that patients as they spend the first 15 years of evolution of T2DM are more affected because they have a high level of anxiety and depression and these results reveal the importance of taking into account the psychosocial factors of the patient in the management and control of your disease (Rivas-Acuña *et al.*, 2011, p. 34).

For its part, Escobar (2016) argues that the presence of depression in people with diabetes influences discouragement, which makes glycemic control difficult. In this sense, he points out that "approximately one fifth of patients with type 2 diabetes mellitus present with depression. In these people, depression is associated with poor glycemic control and increased risk of macrovascular and microvascular complications "(p.11).

Likewise, in the investigation of Antúnez and Bettiol (2016) it is evident that depression increases considerably in diabetic women with the following characteristics:

The frequency of depression in type 2 diabetic patients was 82%, percentage higher in females (59.76%), and a statistically significant association was found between depression and age group of 39-48 years ($p = 0.014043$), single marital status ($p = 0.048476$), with no current occupation ($p = 0.033012$), with chronic complications of diabetes ($p = 0.0005378911$); oral hypoglycemic treatment ($p = 0.0098842716$) y con el uso de insulina ($p = 0.0430326871$) (p. 102).

On the other hand, Constantino-Cerna, Bocanegra-Malca, León-Jiménez and Díaz-Vélez (2014) indicate that anxiety is another of the emotional variables that should be considered in people with diabetes, so it is essential to work in the Strengthening the mental health of the person so that he can control his illness.

Likewise, Azzollini, Bail, Vidal, Benvenuto and Ferrer (2015) emphasize that the control of emotions is fundamental for the biopsychosocial balance of the diabetic, because the greater strengthening of mental health makes it possible to select better decisions, which helps The person has better control and adherence to treatment.

In this regard, Zamora-Vega et al. (2016) add that in order to optimize the treatment of this disease, antidepressant techniques must be designed to combat the unfortunate thoughts. Therefore,

these authors consider that "depression is one of the barriers to achieving the most common therapeutic adherence in people with diabetes" (p.144).

Finally, the Atlas of Mental Health 2011 of the World Health Organization, cited by Bădescu et al. (2016) refer to the relationship between diabetes, depression and poverty:

> It is estimated that four out of every five people with severe mental disorders who live in low and middle income countries do not receive the mental health services they need. In diabetic patients, depression remains underdiagnosed and an important aspect for the diabetes specialist would be the awareness of this fairly common comorbidity (párr. 26).

Materials and methods

Objective and hypothesis

The objective of this study was to determine the level of quality of life of a diabetic person, for which he made a quantitative research, with a descriptive scope and with an experimental design. The research question was as follows: what effect would a personalized intervention program have on the quality of life of a person diagnosed with type 2 diabetes mellitus?

The hypothesis established was the following: the diabetic person has an unsatisfactory quality of life, despite knowledge of the risks of this disease provided through an intervention program. These were the variables: intervention program (independent variable) and quality of life in diabetic person (dependent variable).

Subject of study

The study subject was a 44-year-old female, married, without children, teaching profession of public primary, with more than 15 years of work in front of group and with level of studies of masters. The drugs he consumes are the following: metoformina and januvia for four years; enalapril, escitolapram and farmapram for three years. Twenty years ago she was diagnosed with chondromalacia, which has forced her to limit physical exercise. Regarding diabetes mellitus type

2, it was diagnosed seven years ago. Glucose values obtained in 2012 and 2013 were maintained at 150 mg / dl, risk data that exceeds the minimum acceptable value of 140 mg / dl. In 2017, this value was increased, since it obtained about 205 mg / dl in February and 243 mg / dl in October. Also, it is worth noting that she does not attend a support group, she is informed of the risks derived from the complications of her illness and she lacks a healthy diet.

Intervention plan

A treatment consisting of ten sessions (Table 1) was designed, with a duration of approximately 90 minutes. Once a week he went to his home to work with her in a personalized way. The intervention plan consisted in the application of four instruments, which were used in session one (as pretests) and in session ten (as poststs), so that in the eight remaining sessions four themes were developed: 1) knowing the disease, 2) motivation, 3) physical activity and 4) healthy eating. Each of these topics was treated in two sessions. In addition to this, pressure intake, glucose and weight activities were integrated. Likewise, the blood results of his laboratory studies and the relation of his medications prescribed by his doctor in the Institute of Security and Social Services of State Workers (ISSSTE) were analyzed. In each session the importance of prevention, nutrition and physical activity was emphasized. Likewise, the person was offered a diary to write down the favorable aspects of the actions developed.

Tabla 1. Tratamiento desarrollado

SESIÓN	FECHA	ACTIVIDAD	COMPROMISO
1	8/03/17	Aplicación del instrumento 1, 2, 3 y 4	Realizar las actividades asignadas en las diferentes sesiones.
2	15/03/17	Organizar los resultados de análisis desde el más antiguo hasta el más reciente. Toma de presión, glucosa y peso Tema 1. Conociendo la enfermedad	Continuar con las actividades indicadas.
3	22/03/17	Tema 1. Conociendo la enfermedad Toma de presión, glucosa y peso	Realizar las tres comidas del día y al menos una colación. Disminuir la ingesta de refresco embotellado. Realizar ejercicio todos los días.
4	29/03/17	Tema 2. Motivación Toma de presión, glucosa y peso Revisar estudios de laboratorio	Diseñar una dieta saludable. Realizar la rutina de ejercicios.
5	19/04/17	Tema 2. Motivación Toma de presión, glucosa y peso	Salir más seguido ya sea con su esposo o con sus hermanas. Tratar de realizar las actividades que dejó de hacer antes de que falleciera su mamá. Cambiar la manera que tiene de pensar, es decir, cuando salga no piense que va a tener problemas con los demás. Socializar un poco más.
6	06/06/17	Tema 3. Actividad física Toma de presión, glucosa y peso Explicación del autocuidado en el paciente diabético. Revisar estudios de laboratorio	Continuar con las series de ejercicios y agregar nuevas rutinas de ejercicio. Seguir consumiendo verduras por lo menos dos veces por semana. Realizar al menos una colación al día y realizar sus exámenes clínicos una vez al mes.
7	26/07/17	Tema 3. Actividad física Toma de presión, glucosa y peso Explicación del autocuidado en el paciente diabético.	Continuar con una alimentación sana, incluir colaciones y verduras. Continuar con las series de ejercicios. Salir a caminar por los menos 15 minutos diarios. Consumir más aguas naturales que refrescos embotellados.
8	08/09/17	Tema 4. Alimentación saludable Toma de presión, glucosa y peso Revisar estudios de laboratorio	Continuar con las series de ejercicios. Continuar con una alimentación sana. Tomar un vaso de agua antes de cada comida. Salir a caminar 2 veces a la semana por lo menos 15 minutos. Realizar sus exámenes clínicos una vez al mes.
9	27/10/17	Tema 4. Alimentación saludable Toma de presión, glucosa y peso	Continuar con una alimentación sana. Seguir cumpliendo con las colaciones. Retomar con las series de ejercicios. Realizar la actividad de la libreta. Cambiar la actitud negativa.
10	06/12/17	Aplicación de los instrumentos del postest 1, 2, 3 y 4. Toma de presión, glucosa y peso Agradecimiento y despedida.	Continuar con una alimentación sana. Realizar sus análisis una vez al mes. Seguir cumpliendo con las colaciones. Continuar con la serie de ejercicios.

Fuente: Elaboración propia

Ethical aspects

In this research, the ethical aspects were fulfilled, since the activities were carried out within the framework of the principles of beneficence, respect for the person, justice and autonomy. For this, an informed consent letter was designed, the copy of which was given to the patient to explain the details of the study, the duration and benefits of the activities developed. Likewise, it was foreseen that this investigation would not have risks for the subject; in this sense, the attention was personalized and did not represent any cost for the person.

Instruments

Four instruments were used, which were applied in session one and ten of the treatment. Each one is described below:

1. To determine the knowledge of diabetes mellitus, the questionnaire of Noda, Pérez, Málaga and Aphang (2008) was used, qualitatively qualifying the knowledge that the patient has on the subject of diabetes mellitus. It consists of 16 items with two response options: A = adequate (value 2), I = inadequate (value 0). The higher the value, the greater awareness of the disease and its consequences (Noda et al., 2008).

2. To measure the lifestyle of people with type 2 diabetes mellitus, the IMEVID questionnaire of López, Araiza, Rodríguez and Munguía (2003) was used, in which the patient is asked to select the answer that best reflects his style. of life in the last three months. It consists of 25 items with three response options: every day (value = 4), some days (value = 2) and almost never (value = 0). These are used to measure seven dimensions: nutrition (1-9), physical activity (10, 11 and 12), tobacco consumption (13 and 14), alcohol consumption (15 and 16), information on diabetes (17 and 18).), emotions (19, 20 and 21) and therapeutic adherence (22, 23, 24 and 25). The maximum score that can be achieved with this instrument is 100 (the higher the score, the better the quality of life) (López, Araiza, Rodríguez and Munguía, 2003).

3. To measure therapeutic adherence, the scale of Soria, Vega and Nava (2009) was used, consisting of 21 items divided into three sections (each with seven questions): control over the intake of medicines and foods (1 to 7) , behavioral medical follow-up (8 to 14) and self-efficacy (15 to 21). The response options are the following: yes (value = 2), sometimes (value = 1) and no (value = 0). The higher the score, the greater adherence to treatment (Soria et al., 2009).

4. Finally, the WHOQOL-BREF quality of life scale of the World Health Organization (1993a, 1993b) was used, consisting of 26 items in 4 dimensions: physical health (3, 4, 10, 15, 16, 17 and 18), psychological health (5, 6, 7, 11, 19 and 26), social relations (20, 21 and 22) and environment (8, 9, 12, 13, 14, 23, 24 and 25). It is worth noting that in order to obtain the real value of items 3, 4 and 26, the value of 6 must be taken and the one obtained in the question subtracted, since in this way the final value is obtained. This scale offers five answers: nothing (1), a little (2), moderate (3), enough (4) and totally (5). The higher the score, the better quality of life.

Results

The results are presented following the order of application of the instruments and the values obtained before and after the treatment are compared:

1. Questionnaire for the knowledge of diabetes mellitus: In the pretest the patient obtained 22 points, while in the posttest she got 26 points, which evidences 18.18% increase in the knowledge of subjects of the disease; consequently, it can be indicated that there is no significant difference with the treatment (table 2).

Tabla 2. Cuestionario para el conocimiento de la diabetes *mellitus*

Cuestionario para el conocimiento de la diabetes *mellitus* (Noda *et al.*, 2008)		
Nivel de conocimiento de la diabetes		
N.°	ANTES	DESPUÉS
1	2	2
2	2	2
3	0	2
4	2	2
5	2	0
6	0	0
7	2	2
8	2	2
9	0	2
10	0	2
11	2	2
12	2	2
13	2	2
14	2	2
15	0	0
16	2	2

Fuente: Elaboración propia

2. Instrument to measure lifestyle (IMEVID): The results by dimension were the following: in the nutrition dimension the same value (22 points) was maintained in the pretest and the posttest. In the physical activity dimension there was a decrease in the values (from 10 to 8 points). In the tobacco consumption dimension the same value (8 points) was maintained in the pretest and in the posttest. In the alcohol consumption dimension the same value (8 points) was maintained in the pretest and in the posttest. In the information dimension on diabetes mellitus the same value (2 points) was maintained in the pretest and in the posttest. In the emotions dimension, the value was maintained at 10 points for the pretest and for the posttest. Finally, in the therapeutic adherence dimension there was an increase (from 8 in

the pretest to 10 in the posttest). In summary, the total values of the pretest and the posttest were consistent, so it can be indicated that there was no evidence that the treatment was useful to improve the quality of life of the patient (Table 3).

Tabla 3. Cuestionario IMEVID

Cuestionario IMEVID (López, Araiza, Rodríguez y Munguía, 2003)		
N.°	ANTES	DESPUÉS
1	2	2
2	2	2
3	4	4
4	0	2
5	2	2
6	4	4
7	2	2
8	2	2
9	4	2
10	4	2
11	4	4
12	2	2
13	4	4
14	4	4
15	4	4
16	4	4
17	0	0
18	2	2
19	4	4
20	4	4
21	2	2
22	2	2
23	0	0
24	4	4
25	2	4

Fuente: Elaboración propia

3. Scale to measure therapeutic adherence (EAT): In the control factor over the intake of medicines and foods there was an increase (from 10 points in the pretest to 13 points in the posttest), which represents a favorable change of 16.67% . In the behavioral medical follow-up factor there was also an increase (from 9 to 11 points), which implies a 40% favorable change. Finally, in the self-efficacy factor there was a slight increase (from 7 to 8 points), which represents a 25% favorable change. In summary, it can be affirmed that there was 23.08% greater adherence to treatment (table 4).

Tabla 4. Escala para medir la adherencia terapéutica (EAT)

Escala para medir la adherencia terapéutica (Soria *et al.*, 2009)		
N.°	ANTES	DESPUÉS
1	1	2
2	1	2
3	2	2
4	2	2
5	0	1
6	2	2
7	2	2
8	2	2
9	2	2
10	1	1
11	2	2
12	0	1
13	2	2
14	0	1
15	2	2
16	1	1
17	0	0
18	0	0
19	0	1
20	2	2
21	2	2

Fuente: Elaboración propia

4. Quality of life scale WHOQOL-BREF: Of the four domains evaluated, a slight increase was obtained in two of them: for example, in physical health it went from 22 points in the pretest to 24 points in the posttest. Likewise, in the environment the increase was 1 point, since it went from 23 to 24 points. In short, the total points obtained in the pretest was 81 points, while in the posttest it was 84 points. The benefit obtained, therefore, can not be considered significant because it only represents 3.70% (table 5).

Tabla 5. Escala de calidad de vida WHOQOL-BREF

ANTES	Equiations or computing domain scores	Raw score	Transformed scores	
			4 - 20	0 - 100
Domain 1 Salud física	3+1+3+5+3+4+3	22	13	56
Domain 2 Psicología	3+4+4+5+5+3	24	16	75
Domain 3 Relaciones sociales	5+4+2	11	15	69
Domain 4 Ambiente	2+3+3+3+3+5+2+3	24	12	50
		81		

DESPUÉS	Equiations or computing domain scores	Raw score	Transformed scores	
			4 - 20	0 - 100
Domain 1 Salud física	3+5+2+5+2+4+4	25	14	63
Domain 2 Psicología	3+4+4+5+5+2	23	15	69
Domain 3 Relaciones sociales	5+4+2	11	15	69
Domain 4 Ambiente	3+3+3+3+3+5+2+3	25	13	56
		84		

Fuente: Elaboración propia

Discussion

The results obtained agree with that expressed in NOM-015-SSA2-2010, especially in the sense that diabetes mellitus is a complex condition that can be generated and aggravated by several factors (eg, sedentary lifestyle and overweight).), which affects the quality of life of people. In this sense, the possibility of integrating into groups of supports that contribute to face the collateral effects of this disease should be considered.

On the other hand, and to verify Escobar's (2016) proposals on the link between depression and deficient glycemic control, a diagnosis of depression issued by a health professional should be available. This report would be very useful to compare the results obtained with the instrument implemented to measure the quality of life of the person who participated in this study, as it was found that the patient in none of the four dimensions obtained values close to 80%; In addition, to confirm or refute what was expressed by Escobar, it would be necessary to apply the aforementioned instrument to a larger universe of participants.

Nishtar (2017), on the other hand, explains that women are ten times more likely to suffer from cardiac and depressive problems, which could explain the discouragement of the participant in this research to take control of their disease. In addition to this, it should be emphasized that for the development of this work only the schedule of the first four sessions with the participant could be respected due to their multiple occupations. In other words, it was planned to finish all ten meetings in two and a half months (one per week), but the whole process lasted for nine months (see table 1). In spite of this situation, it is worth mentioning as a strong point of this inquiry the personalized attention made at the patient's home and the implementation of the daily life so that she wrote the positive aspects of each day.

Conclusions

After the analysis of the data obtained, it is concluded that: The quality of life of the participant remained stable in her income and permanence in the treatment; in fact, it only had a slight variation when going from 81 points to 84 points, that is, without significance; The hypothesis set is accepted (that is, the diabetic person has an unsatisfactory quality of life, despite knowledge of the risks of this disease provided through an intervention program) because after ten work sessions there was no a significant change in the improvement of the quality of life of the subject of study; The planted objective was achieved, since it was possible to determine the level of quality of life of the study subject.

Recommendations: Go to a support group of people with diabetes and review the websites of international and national associations and federations, as this knowledge will offer you better perspectives on how to deal with this disease; Implement a strategy that allows you to have a better lifestyle, through a healthy diet and low impact physical exercise; Strengthen the mental health aspect with a professional in the area that allows you to become aware of the benefits that activities such as those proposed in this research may offer and for future studies on the subject of diabetes mellitus. It is suggested to implement a non-pharmacological treatment that integrates completely educational curriculum proposed by NOM-015-SSA2-2010, which includes the following seven self-care behaviors: eating healthy, doing physical activity, monitoring my values, taking my medications, finding solutions, reducing my risks and adapting healthily.

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Rol de Contribución	Autor (es)
Conceptualización	**JAQUELINE GUADALUPE GUERRERO CEH**
Metodología	**JAQUELINE GUADALUPE GUERRERO CEH (principal) y Ana Rosa Can Valle (apoyo).**
Software	**JAQUELINE GUADALUPE GUERRERO CEH**
Validación	**JAQUELINE GUADALUPE GUERRERO CEH**
Análisis Formal	**JAQUELINE GUADALUPE GUERRERO CEH**
Investigación	**JAQUELINE GUADALUPE GUERRERO CEH (principal) y Ana Rosa Can Valle (apoyo).**
Recursos	**JAQUELINE GUADALUPE GUERRERO CEH**
Curación de datos	**JAQUELINE GUADALUPE GUERRERO CEH (principal) y Angelica Alejandra Ehuan Cab (apoyo)**
Escritura - Preparación del borrador original	**JAQUELINE GUADALUPE GUERRERO CEH**
Escritura - Revisión y edición	**JAQUELINE GUADALUPE GUERRERO CEH**
Visualización	**JAQUELINE GUADALUPE GUERRERO CEH**
Supervisión	**JAQUELINE GUADALUPE GUERRERO CEH**
Administración de Proyectos	**JAQUELINE GUADALUPE GUERRERO CEH**
Adquisición de fondos	**JAQUELINE GUADALUPE GUERRERO CEH**