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ORIGINAL ARTICLE

ASSESSMENT OF QUALITY OF LIFE OF PATIENTS WITH TYPE 2 DIABETES MELLITUS

AVALIAÇÃO DA QUALIDADE DE VIDA DE PORTADORES DE DIABETES MELLITUS TIPO 2 EVALUACIÓN DE LA CALIDAD DE VIDA DE PACIENTES CON DIABETES MELLITUS TIPO 2

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ABSTRACT

Objective: to assess the quality of life of patients with type 2 diabetes mellitus. **Methods:** this is an exploratory-descriptive research, quantitative, carried out after the approval by the Research Ethics Committee of Faculdades Integradas de Patos, under the Protocol 165/2011. The study population consisted of 20 patients with type 2 diabetes mellitus, enrolled in the Family Health Strategy; the sample comprised 100% of these patients. **Results:** 100% of respondents live in the urban zone and 65% are women. As for knowledge on the disease, 100% reported to have some knowledge; 85% follow the diet indicated by the health professional; 90% use medication in the correct way; and 50% reported having a good quality of life. **Conclusion:** type 2 diabetes mellitus is regarded as a major public health problem, due to its high frequency among the population, as well as its complications, mortality, high financial and social costs involved in treatment, and the significant deterioration in quality of life. **Descriptors:** Health Promotion; Diabetes Mellitus; Quality of Life.

RESUMO

Objetivo: avaliar a qualidade de vida de portadores de diabetes mellitus tipo 2. **Método:** trata-se de pesquisa exploratório-descritiva, quantitativa, realizada após a aprovação do Comitê de Ética em Pesquisa das Faculdades Integradas de Patos, sob o Protocolo n. 165/2011. A população do estudo foi constituída por 20 pacientes portadores de diabetes mellitus tipo 2, cadastrados na Estratégia Saúde da Família; a amostra foi composta por 100% desses pacientes. **Resultados:** 100% dos entrevistados residem na zona urbana e 65% são do sexo feminino. Quanto ao conhecimento da doença, 100% relataram ter algum conhecimento; 85% seguem a dieta indicada pelo profissional da saúde; 90% usam corretamente a medicação; e 50% relataram ter uma boa qualidade de vida. **Conclusão:** o diabetes mellitus tipo 2 é considerado um grave problema de saúde pública, por sua alta frequência na população, assim como suas complicações, mortalidade, altos custos financeiros e sociais envolvidos no tratamento e a significativa deterioração da qualidade de vida. **Descritores:** Promoção da Saúde; Diabetes Mellitus; Qualidade de Vida.

RESUMEN

Objetivo: evaluar la calidad de vida de pacientes con diabetes mellitus tipo 2. **Método:** esta es una investigación exploratorio-descriptiva, cuantitativa, llevada a cabo después de la aprobación del Comité de Ética en Investigación de las Faculdades Integradas de Patos, bajo el Protocolo 165/2011. La población del estudio consistió de 20 pacientes con diabetes mellitus tipo 2, inscritos en la Estrategia Salud de la Familia; la muestra fue compuesta por 100% de estos pacientes. **Resultados:** 100% de los encuestados residen en la zona urbana y 65% son mujeres. En cuanto al conocimiento de la enfermedad, 100% reportaron tener algún conocimiento; 85% siguen la dieta indicada por el profesional de la salud; 90% usan la medicación correctamente; y 50% reportaron tener una buena calidad de vida. **Conclusión:** la diabetes mellitus tipo 2 es considerada un grave problema de salud pública, debido a su alta frecuencia en la población, así como sus complicaciones, mortalidad, altos costos financieros y sociales involucrados en el tratamiento y el significativo deterioro de la calidad de vida. **Descriptores:** Promoción de La Salud; Diabetes Mellitus; Calidad de Vida.

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INTRODUCTION

Diabetes mellitus (DM) consists in a group of disorders that involves different pathogenic mechanisms, whose main characteristic is hyperglycemia associated with a hormonal defect, which is absolute or relative lack of insulin in the body. When the insulin produced by the pancreas becomes insufficient, glucose is prevented from being absorbed by cells, this causes an increase in blood levels of glucose, whose normal rate when fasting is 70 to 110 mg/dl per 100 ml of blood.¹

DM is the sixth leading cause of hospital admission as primary diagnosis and it is present in 30 to 50% of other causes, such as ischemic heart disease, heart failure, cholecystopathy, stroke, and hypertension; 30% of patients who were hospitalized in coronary care units have the disease, in addition, DM is the major cause of non-traumatic amputation of lower limbs and also the leading cause of blindness.²

Patients with DM face major changes in lifestyle, such as changes in eating habits and adherence to restrictive therapeutic regimens. Besides, patients must deal with the fact of having to live their whole life with a disease that is responsible for clinical complications that impair the individual's health.³

Type 2 diabetes mellitus (T2DM) often occurs in patients > 40 years and in more than 50% of cases it develops in patients > 55 years. The main factors that contribute to the onset of T2DM are: ethnicity, genetics, age, overweight and obesity, and sedentary lifestyle, that is, this type of diabetes is related to the association of strong genetic and family predisposition with the lifestyle and environmental factors.⁴

T2DM affects approximately 90% of cases, frequently associated with obesity; and symptoms of fatigue, weight gain, wound healing, and recurrent infections are usually insidious. Patients with this type of diabetes can be further treated with insulin, yet remain still referred to as T2DM patients.⁵

Although age and family history, among other not modifiable factors, may be present, actually, the modifiable risk factors for T2DM are those which should be targeted in interventions. Among the modifiable risk factors for T2DM stand out diet therapy factors and obesity, sedentary lifestyle, as well as smoking. Psychosocial stress and major depressive episodes may also be associated with an increased risk for T2DM.⁶

It is known that T2DM is caused by insulin deficiency and that several aspects lead to disease risk, from family history to lifestyle, such as obese and sedentary people, and, then, we ask: how can we assess the quality of life of patients with T2DM?

In this context, this study aimed to assess the quality of life of patients with T2DM, being essential for that the adoption of behavioral changes and, when needed, the correct use of pharmacological agents.

METHOD

Paper developed from the monograph **Assessment of quality of life of patients with type 2 diabetes mellitus**, presented to Faculdades Integradas de Patos. Patos-PB, Brazil. 2012.

This is an exploratory-descriptive study with quantitative approach, carried out with a group of patients with T2DM, enrolled in the Family Health Strategy (FHS) in the town of Patos, Paraíba, Brazil.

The target population of this research consisted of 20 patients enrolled in this FHS unit and the sample comprised 100% of this population. As inclusion criteria we selected patients diagnosed with diabetes for > 1 year. The exclusion criteria were patients diagnosed for < 1 year and those who were not at the study site at the collection time.

We used an instrument consisting of socio-demographic data pertinent to the study objective. Data obtained from the questionnaire were statistically analyzed and the results were presented in figure form, in order to facilitate the understanding and approach concerned, for presenting the assessment of the quality of life of patients with T2DM. Data were analyzed using the software *Microsoft Office Excel 2007*. The procedures allowed the analysis and discussion, based on literature pertinent to the subject.

Data collection was performed in February 2012, after review and approval by the Research Ethics Committee of Faculdades Integradas de Patos, under the Protocol 169/2011, complying with the Resolution 196/96, from the Brazilian National Health Council (CNS), which provides for researches involving human beings. The subjects demonstrated acceptance and interest in participating in the interview by signing the free and informed consent term.

RESULTS AND DISCUSSION

The higher incidence of patients with T2DM is in the age group from 65 to 75 years.

Diabetes is particularly prevalent among elderly people, with up to 50% of people > 65 suffering some degree of glucose intolerance.⁷ This disease affects especially the higher age groups, without distinction of race, sex, or socioeconomic conditions, and its importance increases according to its prevalence in the world population.⁸

Regarding sex, we verified that 13 individuals (65%) were female and 7 (35%) male, with prevalence of the female population. This disease is more common in certain groups, for instance, among women.⁹

As for the precedence, we observed that 100% of individuals are from urban areas, the prevalence of diabetes mellitus and glucose tolerance in urban population reaches 15.4%,

it is estimated that there are 8 million Brazilian people who need specific guidance for planning and changes in eating habits and lifestyle.¹⁰

When asked about the knowledge of the disease, 20 individuals (100%) said to know the disease. A study aiming to report knowledge on diabetes control showed that the knowledge associated to the lifestyle, beliefs, and metabolic control may have great impact on people’s behavior.¹¹

The diabetes education program aims to increase knowledge on the disease, develop skills for self-care, stimulate behavior changes, provide support to solve daily problems deriving from this disease, and prevent acute and chronic complications.¹²

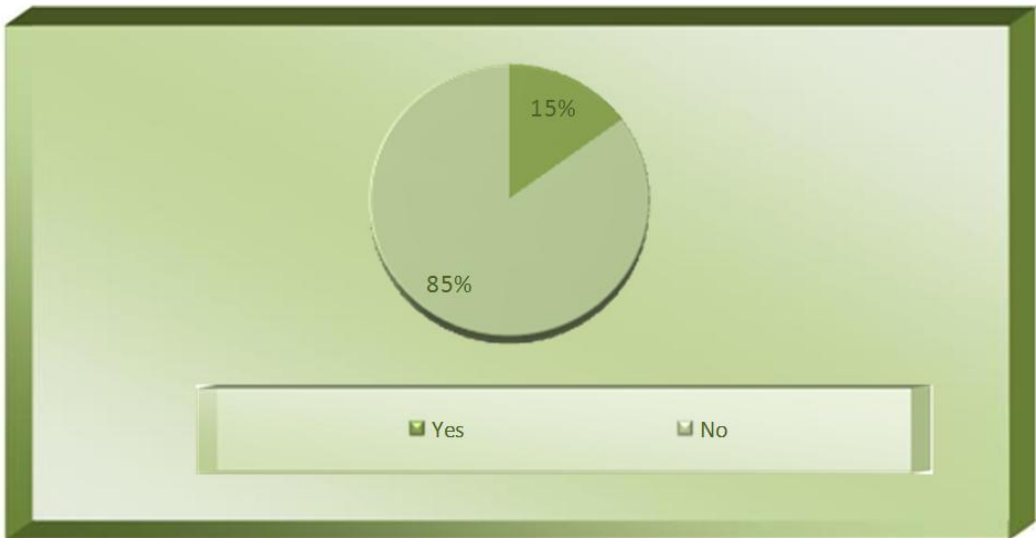


Figure 1. Data related to adhesion to the diet indicated by health professionals.

Regarding diet, 17 patients (85%) comply with the diet, as indicated, while 3 (15%) do not do this, thus presenting a sample with satisfactory results. Following the diet and performing physical exercises are key activities for diabetes treatment. Not complying with the diet may mean an inadequate intake of nutrients that contribute to a poor metabolic control.¹³

It is up to the nurses to educate the patients so that they gain knowledge about their conditions, the health risks, encouraging

acceptance of the disease and the implementation of self-control measures, such as: control of blood glucose levels through nutritional change (according to the food pyramid), physical exercises, drug therapy, in addition to preventive measures such as foot care, regular blood pressure measurements and avoiding bad life habits, such as high fat foods, smoking, and alcohol. Nurses should inform the patient about symptoms of hypoglycemia and hyperglycemia, so that she/he knows how to act in these situations.¹⁴

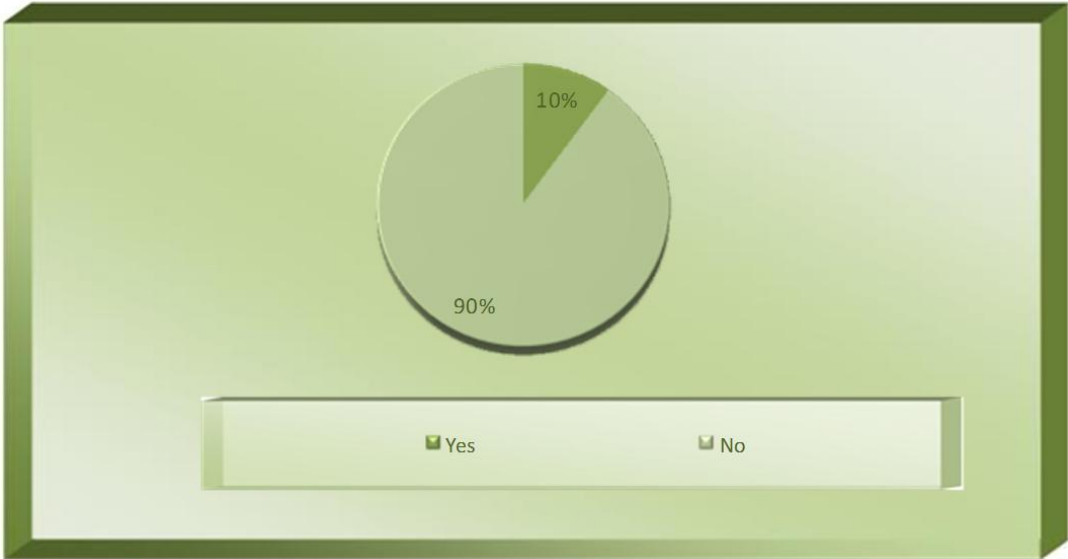


Figure 2. Distribution of diabetic patients with regard to the proper use of medication.

Concerning drug therapy, 18 individuals (90%) use it correctly and only 2 (10%) do not comply with the proper treatment. The result is regarded as positive, since the large majority of diabetic people have a a facilitator, which is treatment adherence. A much smaller, but important, amount of carriers confess not correctly follow the proposed treatment for their problem,

mentioning various types of barriers to non-compliance.

The diabetes treatment aims, predominantly, at the glycemic control.¹⁵ The Brazilian Diabetes Society also recommends as goals: relieve symptoms, improve quality of life, prevent acute and chronic complications, reduce mortality, and treat associated diseases.¹²

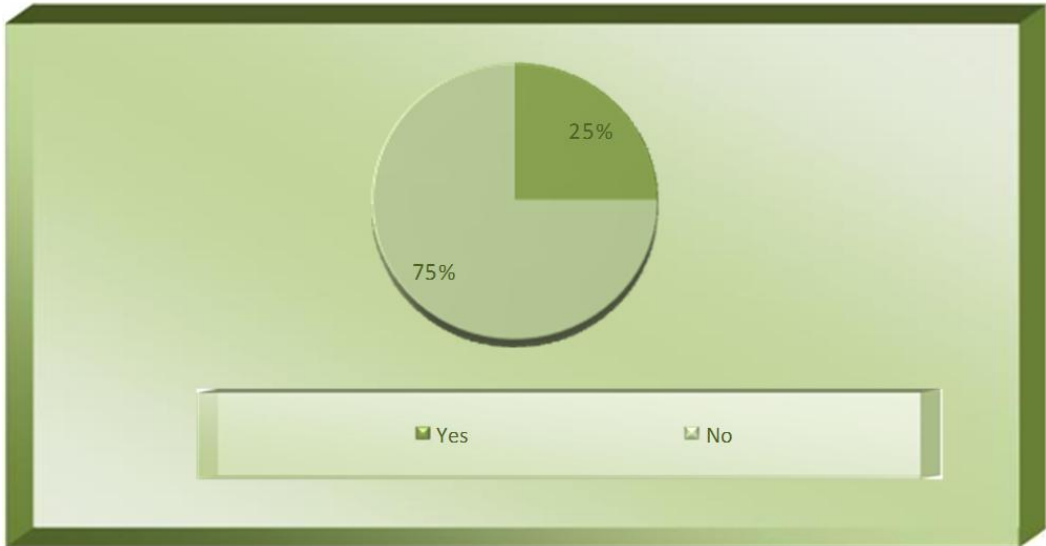


Figure 3. Data distribution with regard to the number of hospital admissions due to illness.

Figure 3 clearly shows that, despite diabetes brings many complications, there were few cases of hospitalization resulting from complications of this disease, only 25% of patients reported having been hospitalized, and 75% denied any hospitalization due to illness.

Consequently, DM appears as the sixth most frequent cause of hospitalization and contributes significantly to other causes, such as ischemic heart disease, heart failure, stroke, and hypertension. Diabetic patients represent about 30% of individuals hospitalized in the cardiac intensive care unit. This disease is the leading cause of lower limb amputation and, also, the leading cause for acquired blindness. Moreover, about 26% of patients who enter dialysis programs are diabetic.¹⁶

We noticed that 10 diabetic patients (50%) regarded themselves as having a good health and 10 (50%) regarded themselves as having a poor health status. People who think having a good health status may have a longer life, when compared to those who state having a poor health status, because these people are at greater risk of acquiring several diseases.

This new health concept will bring new implications when it comes to health care practices, particularly with regard to the interaction between biological, psychological, and social factors to assess the health/disease status of individuals, including both more objective and more subjective dimensions. If the disease should be assessed having the health professionals' opinion as a basis, properly grounded on assessment techniques at their disposal, regardless of the assessed

individual’s opinion, then, health can only be

assessed by the individual her/himself.¹⁷

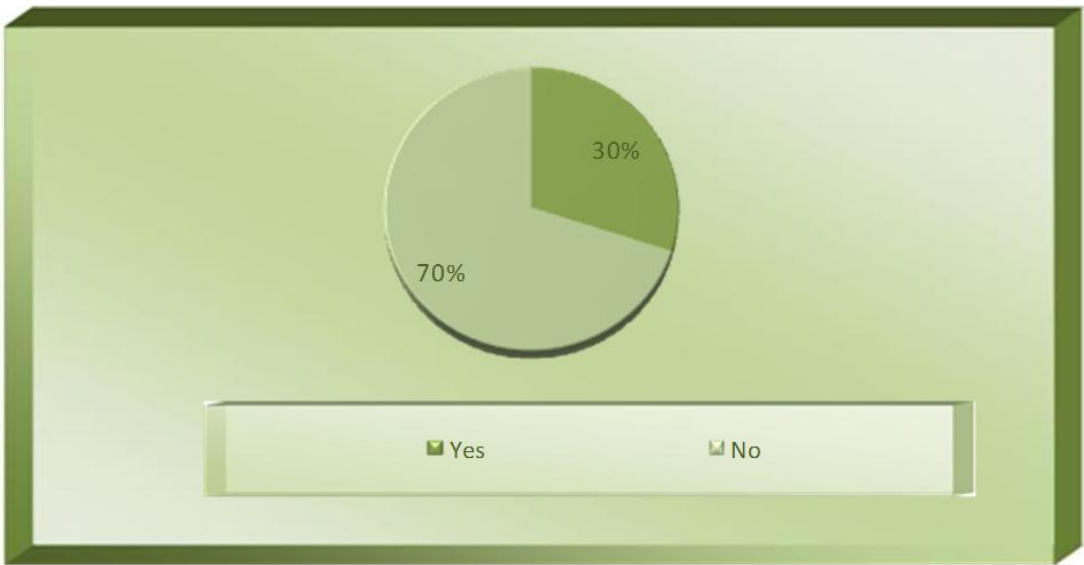


Figure 4. Data distribution with regard to the existence of difficulties for fulfilling daily life activities.

Regarding the difficulties found in the execution of daily life activities, 14 individuals (70%) said they have difficulty for fulfilling the tasks and 6 (30%) have not reported any setback. We can see that people who reported not experiencing difficulties are precisely those with a higher quality of life, because, although they are experiencing the aging process and being diabetic, they still have autonomy to perform their daily life activities.

There are consistent evidences of the effects of physical exercise on DM, such as improved glycemic control, reduced risk of

cardiovascular diseases, decreased body weight, and increased self-esteem.¹⁰

Physical exercise is a healthy activity for anyone, however, it brings additional benefits to DM patients, such as improved physical conditioning, especially the cardiorespiratory fitness, increased muscle mass and decreased psychological stress caused by the disease, as well as daily life problems.¹⁶

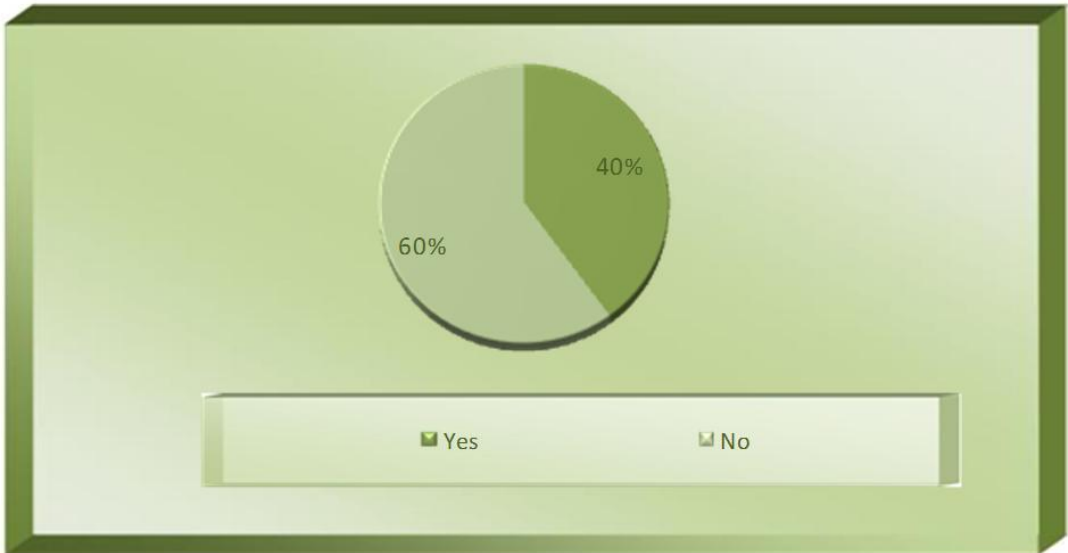


Figure 5. Data related to negative feelings towards the disease.

When asked about the negative feelings, 12 individuals (60%) answered that presented negative feelings at some point and 8 (40%) said they did not have bad feelings. This implies that these people who had the highest scores have a higher risk for depression, whether severe or mild, when compared to those who do not have any negative feelings.

Depressive symptoms are correlated with the level of disability and negatively with the

adequacy of social support. Additionally, social support relieves depression in individuals with greater disability related to disease. Thus, it seems that an adequate social support allows a relative protection against depression, while individuals with inadequate social support presents a greater risk of depressive symptoms, when disease-related disability increases.⁹

We verified that 100% of patients feel satisfied with the access to services; they also reported a good care, followed by guidelines and information on the disease.

The concept of user's satisfaction focuses on the assessment of health quality. There are several models of measurement, but all have the common assumption of approaching the perceptions of patients with regard to their expectations, values, and desires. In general, user's satisfaction can be defined as the assessment that each individual makes of the different health care dimensions.¹⁶

The quality of services offered is influenced by the subjective perception of the user about the services. Satisfaction is assessed based on users' opinions about the quality of service provided with regard to the resoluteness in providing services, among others. In general, these aspects assess the efficacy, effectiveness, efficiency, compliance, equity, adequacy, and legitimacy.¹⁷

We observe that, in the question about the way how the individuals assess their quality of life, 10 individuals (50%) reported having a good quality of life and 10 (50%) a poor quality of life. Those people who believe having a poor quality of life are at greater risk for low self-esteem, because this decreases serotonin, something which can often lead to depression.

In this context, the quality of life depends on the emotional interpretation that each individual makes of facts and events and it is closely related to the subjective perception of events and living conditions. A decreased vision, for instance, can mean the same for two different individuals, the functional loss has different emotional and social importance for each individual.¹¹

The quality of life can be influenced by the perception that the individuals have on their health. This statement reinforces the fact that, for respondents, being healthy is a factor regarded as important for their quality of life.¹³

The assessment of quality of life is particularly important for monitoring of chronically ill patients, especially diabetic people, in which the health harms persist, despite adequate treatment, and the need for changes in lifestyle and adequate control of blood glucose influence the way how individuals evaluate their well-being.⁸

CONCLUSION

T2DM is regarded as a major public health problem due to its high frequency among the population, its complications, mortality, high

financial and social costs involved in treatment and significant deterioration in the quality of life, being more prevalent, especially, in obese and sedentary individuals; they must control their blood sugar through diet and physical activity and, when needed, by using oral hypoglycemic.

We observed that, although many respondents were elderly people, they reported having a good quality of life, when it came to satisfaction with the services offered, the results were good, but with regard to the issue of hospitalization, we observed that, although diabetes is a chronic disease entailing a series of complications, there are few patients hospitalized due to its complications, that is, these patients who were never admitted perform a good follow-up and follow their diet in a correct way.

Thus, we may say that the research objectives were achieved, by verifying that, although most of these people are going through the aging process and dealing with a chronic and incurable disease, they think to have a good quality of life. Therefore, there is a need for promoting intervention programs which seek for changes in lifestyle, in order to improve the quality of life of T2DM patients.

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