

<https://doi.org/10.23913/rics.v9i17.86>

*Artículos Científicos*

## **Estudio socioeducativo sobre la revisión de la salud mental en pacientes con diabetes mellitus tipo 2**

*Socio-educational study on the review of mental health in patients with  
mellitus diabetes type 2*

*Estudo socioeducativo sobre a revisão da saúde mental em pacientes com  
diabetes mellitus tipo 2*

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## Resumen

La salud mental es parte significativa de la salud en general. Las personas que cuentan con un estado emocionalmente equilibrado tienen el control de sus pensamientos y comportamientos, y son capaces de enfrentar los desafíos que se presentan en su entorno cotidiano. Un paciente emocionalmente sano se puede recuperar de contratiempos, sentirse bien consigo mismo y tener una relación social armónica. La diabetes mellitus tipo 2 es una de las principales enfermedades crónico-degenerativas que deben ser atendidas en los centros de salud debido a las complicaciones físico-emocionales que genera en los pacientes. En México, se estima que existen aproximadamente 8.6 millones de diabéticos (Encuesta Nacional de Salud, 2018). El presente artículo aborda las diversas investigaciones y modelos teóricos que podrían favorecer el cuidado de la salud mental en los pacientes con diabetes mellitus tipo 2. El papel del psicólogo es acompañar a esas personas en el proceso de aceptación del diagnóstico, en el cambio de conductas saludables y en la adherencia al tratamiento formulado para que puedan mejorar su calidad de vida.

**Palabras claves:** alteraciones emocionales y la importancia del psicólogo, diabetes mellitus tipo 2, salud mental.

## Abstract

Mental health is a fundamental part of overall health; people who have an emotionally balanced state are in control of their thoughts and behaviors and are able to face the challenges that arise in their everyday environment. An emotionally healthy patient can recover from setbacks, feel good about himself and have a good social relationship. Type 2 diabetes mellitus is one of the main chronic degenerative diseases that is paramount to prevent in health centers, because of the physical-emotional complications it generates in patients. In Mexico, there are an estimated 8.6 million diabetics (National Health Survey 2018). This article discusses the various research, studies and theoretical models that could promote mental health care in patients with type 2 diabetes mellitus. The role of the psychologist is to accompany the patient during the acceptance of the diagnosis, in the change of healthy behaviors, in adherence to treatment and increase the evidence on how to improve the quality of life of patients with this disease.



**Keywords:** emotional alterations and the importance of the psychologist, diabetes mellitus type 2, mental health.

## Resumo

A saúde mental é uma parte fundamental da saúde geral; pessoas que têm um estado emocionalmente equilibrado estão no controle de seus pensamentos e comportamentos e são capazes de enfrentar os desafios que surgem em seu ambiente cotidiano. Um paciente emocionalmente saudável pode se recuperar de contratempos, sentir-se bem consigo mesmo e ter uma boa relação social. O diabetes mellitus tipo 2 é uma das principais doenças crônicas degenerativas que é primordial para prevenir nos centros de saúde, devido às complicações físico-emocionais que gera nos pacientes. No México, estima-se que existam 8,6 milhões de diabéticos (National Health Survey 2018). Este artigo discute as diversas pesquisas, estudos e modelos teóricos que poderiam promover o cuidado em saúde mental em pacientes com diabetes mellitus tipo 2. O papel do psicólogo é acompanhar o paciente durante a aceitação do diagnóstico, na mudança de comportamentos saudáveis, na adesão ao tratamento e aumentar as evidências sobre como melhorar a qualidade de vida dos pacientes com essa doença.

**Keywords:** distúrbios emocionais e a importância do psicólogo, diabetes mellitus tipo 2, saúde mental.

**Fecha Recepción:** Mayo 2019

**Fecha Aceptación:** Noviembre 2019

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## Introduction

Bad eating habits, as well as sedentary life are factors that influence overweight and obesity. In Mexico, as reported in the National Health Survey (ENSA) (2018), it is estimated that at least 70% of adults and 39.9% of children suffer from obesity, which can contribute to the generation of chronic diseases degenerative as type 2 diabetes mellitus. This in many cases is manifested without the patient presenting any symptoms, hence it can be detected when it has already produced serious damage to the body, which can subsequently generate complications such as diabetic foot, diabetic retinopathy or kidney damage (ENSA, 2012), which considerably affects the quality of life (Oblitas, 2008).

According to some studies (Aujoulat et al., 2015), this problem is accentuated because some patients neglect the formulated treatment and because an interdisciplinary work is often lacking that allows treating this medical condition from various perspectives. In the case of psychologists specialized in the area of health, it has been indicated that these professionals can help patients in a job of accepting the disease, which would allow treating anxiety disorders and depression that it could generate. However, so far there are few studies focused on knowing the mental health status of people who suffer from this clinical picture, which is why in the present work it has been decided to ask the following question:

## Research question

What is the state of mental health of patients with type 2 diabetes mellitus, highlighting the importance of the professional work of health psychologists?

## Objectives

- Analyze the state of mental health of patients with type 2 diabetes mellitus, highlighting the importance of the professional work of health psychologists.
- Describe the statistical indices of diabetes mellitus 2 in Mexico.
- To determine the public health problem that emphasizes its physical and emotional impact that deteriorates the quality of life of patients during the evolution of type 2 diabetes mellitus in Mexico.
- Determine the psychological intervention in patients with type 2 diabetes mellitus.



## Hypothesis

There is an impact on the mental health of patients with type 2 diabetes mellitus, which is why the professional work of health psychologists is necessary.

## State of knowledge

### Diabetes mellitus type 2

Type 2 diabetes mellitus is one of the most common chronic metabolic diseases in the world (Azzollini, Bail Pupko, Vidal, Benvenuto and Ferrer, 2015). This is caused by the ineffective segregation of insulin caused by factors such as overweight and obesity, inadequate eating habits, physical inactivity, family inheritance, among others (Zenteno-López, Tzontehua-Tzontehua, Gil-Londoño, Contreras-Arroy and Galicia-Aguilar, 2016). This clinical picture can be presented in all socioeconomic, ethnic and cultural groups, and its manifestations are progressive (Zavala, Vázquez Martínez and Whetsell, 2006).

According to the world report on diabetes presented by the World Health Organization (WHO) (2016), it is estimated that 422 million adults had diabetes in 2014, while in 2012 there were 1.5 million deaths. In the case of Mexico, ENSA (2018) reported that the prevalence of type 2 diabetes mellitus in patients over 20 years of age went from 6.7% in 1993 to 7.3% in 2018. In addition to this, it was reported that 77.3% of patients with type 2 diabetes mellitus already knew their diagnosis on this last date, while 22.7% were diagnosed during their participation in the survey. In other words, it is estimated that there are approximately 8.6 million diabetics diagnosed, a figure that could reach 11.7 million by 2025, with a higher prevalence in women than in men.

Mexico is one of the countries with the highest rates of diabetes, which have increased rapidly in recent years (Andrade Córdova, Antonio López and Cerezo Bautista, 2012). An example of this is the state of Jalisco, where 7.6% of the population was diagnosed in 2018 with type 2 diabetes mellitus. For this reason, this condition has been considered a public health problem that affects both physical and mental status of people (Méndez López, Gómez López, García Ruiz, Pérez López y Navarrete Escobar, 2004).

## **Physiological complications that develop with diabetes type 2 mellitus**

Diabetes mellitus 2 is a serious and chronic disease that occurs when the pancreas does not produce insulin (a hormone that regulates glucose in the blood) or when the body cannot effectively use the insulin generated (Pompa Guajardo, 2004). The prevalence of diabetes mellitus 2 increases with age (at least 0.5% in people over the age of 30) and obesity and a sedentary lifestyle are believed to contribute to the pathogenesis. In addition, metabolic, structural and aging changes can multiply the risks of suffering vascular, neurodegenerative and other aetiology complications.

Type 2 diabetes mellitus, logically, can cause complications and comorbidities, such as cardiovascular diseases, hypertension, kidney disease, end-stage renal failure (Burgos Peláez, Joaquim, Puiggros Llop and Chicharro Serrano, 2010), neuropathy and retinopathy. (Abdulkareem *et al.*, 2017; OMS, 2016).

### **Diabetic neuropathy**

From the structural point of view, patients with this disease present alterations in the white matter, as well as high rates of subcortical atrophy, which generates a low performance in the tasks that require cognitive functions, such as attention, memory and verbal fluency (Akisaki *et al.*, 2006; Bruehl *et al.*, 2007).

According to Pérez Martínez (2010), worldwide, this is the main cause of lower limb amputations and blindness in people whose age ranges between 18 and 65 years. With regard to non-traumatic amputations, the figures are alarming, since it is calculated that every 30 seconds a person loses a member of their body. These complications, according to Azzollini *et al.* (2015) and Valenciaga (2005), are accentuated when the recommended treatment is neglected, family and social support is decreased, and physical exercise is reduced.

### **Adherence to treatment in patients with type 2 diabetes mellitus**

Castro Cabeza, Rodríguez Chamorro and Ramos Mejía (2005) They mention that diabetic patients lack skills to manage the disease, which is why they suspend medical indications and move away from health services. Therefore, looking for alternatives to adhere to treatment has become a research topic that has been addressed with different approaches

and methodologies (Ortiz, Ortiz, Gatica and Gómez, 2006) to facilitate the real approach to the problem, primarily in the knowledge, perceptions, attitudes, fears and practices of people with diabetes in the socio-family setting (Pérez Martínez, 2010).

In 2003, for example, a study was carried out involving 350 patients from northeast Mexico with type 2 diabetes mellitus, who mentioned that the "scare" gave rise to their disease; This response was independently to the age, marital status, evolution time and complications present in the patient at the time of the study (Garza Elizondo, Calderón Dimas, Salinas Martínez, Núñez Rocha and Villarreal Ríos, 2003).

Another investigation carried out with ten women and ten men diagnosed with type 2 diabetes mellitus (whose age range ranged from 50 to 60 years) reported that the participants attributed the origin of their disease to three factors: stress situations (fright, fright or courage), divine design and habits they had before the disease (Andrade Córdova et al., 2012). According to these authors, type 2 diabetes mellitus generates anguish and frustration in patients, feelings that lead them to justify this condition according to their beliefs.

Garza Elizondo et al. (2003), for their part, consider that the channel of communication between the doctor and the patient should be promoted so that the latter understands the process by which he must go through, which may serve to strictly follow the assigned treatment. For this, however, the specialist must also take into account the knowledge, perceptions, beliefs and motivation of the patient to regain their health (Pérez Martínez, 2010). For this reason, some authors suggest that empowerment, motivation to change behaviors and support for problem solving may favor the treatment of type 2 diabetes mellitus, for which the social environment, educational level and patient culture (Rosas-Saucedo *et al.*, 2017).

The course of a chronic diagnosis implies significant changes in the physical, work and social activity of people, who must psychologically assume the role of patients with the disease (Olvera Méndez and Soria Trujano, 2008), so it is important to find a model theoretical that encompasses all aspects of the health-disease process.

In this sense, Bazán Riverón (2003) proposes that health psychology should consider such a process at a conceptual, methodological and organizational level in population care services, hence special interest should be placed on the psychological variables that influence in determining health status, risk of disease, disease conditions, and recovery.



Health psychology, therefore, is defined by Oblitas (2008) as the field of psychology specialization that applies the principles, techniques and scientific knowledge developed for evaluation, diagnosis, prevention and treatment. Health psychology, in other words, focuses on interventions aimed at modifying attitudes for the promotion and / or improvement of health, as well as the implementation of education campaigns for the community in order to improve the health system by implementing policy adequate hygiene (Oblitas, 2017).

On a practical level, the model of health psychology includes useful actions for the prevention and care of patients, including people with sequelae and the adaptation of health services to the needs of the population (Fernández Alves, Carmo and Jiménez Brobeil, 2009).

Another theoretical position is the so-called biopsychosocial model, which considers that elements such as biochemical changes, social context, physical environment, socioeconomic circumstances, climatic factors, thoughts, emotions, among others, intervene in the health and disease correlation. (Oblitas, 2017; Taylor, 2007).

### **Emotional disturbances in patients with type 2 diabetes mellitus**

Every day there is a greater number of investigations on the mental health of patients with diabetes mellitus, which has served to determine that there is a correlation between emotional disorders and this condition. In this sense, a study carried out with patients who had this disease reported that people expressed feelings of frustration and rejection from the diagnosis of the disease, resistance to change in their lifestyles (Serrano Becerril, Zamora Hernández, Navarro Rojas and Villareal Ríos, 2012) and emotional tensions in the treatment phases (Rosas-Saucedo et al., 2017).

In addition to this, anxiety constitutes an emotional alteration that occurs in the daily life of patients with type 2 diabetes mellitus, a feeling that acts as a threatening and latent factor in four points: 1) weight loss, 2) alterations in blood glucose levels, 3) decreased sensitivity and 4) dysfunction in the metabolism of nutrients that affect the physiological mode. All this causes feelings of hopelessness, dependency and insecurity in the patient, which severely undermines his self-concept (Zavala et al., 2006).

Another study conducted in Saudi Arabia on 158 patients with type 2 diabetes mellitus reported that 53.8% suffered from depression and 50.6% anxiety. The factors associated with anxiety were physical inactivity, the long hospital stay and the number of



complications; while the elements linked to depression were advanced age, low educational level, low monthly income, unfavorable work status, the highest number of complications and physical inactivity (Abdulkareem et al., 2017).

Some authors affirm that the sum of these complications and comorbidities with the emotional stress of a chronic diagnosis favor the development of depression and anxiety. In other words, patients with diabetes mellitus have twice the risk of depression and anxiety compared to the general population. (Abdulkareem *et al.*, 2017).

In an investigation by Pineda et al. (2004) it was shown that type 2 diabetes mellitus physically affects patients, so their lifestyles must be modified. Inquiries comparing the quality of life reported by adults with this disease and the general population have shown that the quality of life of the former is severely affected (Hervás, Zabaleta, De Miguel, Beldarrain and Díez, 2007) due to complications. that lead to disability or premature death (Valenciaga, 2005).

On the other hand, Corona-Hernández and Bautista-Samperio (2004) explain that this disease, in 68.9% of those who suffer from it, could have originated due to a hereditary history in the first line, while in 84.9% of cases the disease was associated with physical inactivity, and in 47.1% due to being overweight or obese.

In this context, the objectives of a psychological intervention should focus on promoting changes in habits for health and generating self-care needs (Zenteno-López et al., 2016). For this, and according to Castro Cabeza et al. (2005), intervention strategies should be built from the patient's education, behavioral, cognitive, and emotional evaluation, which should stimulate self-care skills, adherence to treatment, and coping resources against stress.

Patients suffering from type 2 diabetes mellitus, unlike those who have been diagnosed with other pathologies, can take some medicine or take insulin in the morning, but at the same time they must avoid sudden changes in their diets, exercises, stress levels and emotional disturbances, factors that can affect your glucose levels. For this reason, Pineda et al. (2004) state that the more patients know their diagnosis, treatment and complications, the greater the domain of their state. As it is a chronic pathology, it is essential that this support be maintained over time and adapted to each stage of the patient's life so that they learn to live with it.

In summary, it is essential that the health psychologist promote attitudes that address the following topics:

- 1) Early identification of people at risk of acquiring the disease.
- 2) Design, develop and execute health education programs.
- 3) Promote healthy behaviors.
- 4) Increase research on how to improve the quality of life of patients with type 2 diabetes mellitus.
- 5) Promote multidisciplinary work (Olvera Méndez y Soria Trujano, 2008).

## **Discussion**

The importance of the psychologist as a health professional and his possible collaboration with other professionals to promote intervention alternatives that favor the mental health of patients with type 2 diabetes mellitus has been highlighted by Moncada Bueno and Parmerín García (2007). These authors have explained that the theoretical-scientific knowledge and flexibility that psychologists develop in their areas (clinical, educational, community, social) enable them widely to develop intervention techniques valid in different community settings, as well as to disseminate knowledge other social agents and initiate research on various problems to detect, spread and generate social changes that enable healthy lifestyles.

According to Olvera Méndez and Soria Trujano (2008), the intervention of the psychologist allows the patient to understand and assume less aggressively the chronic condition that underlies their disease. The psychologist as a health professional can work in different areas, such as the psychological treatment of organic disorders, collaboration in medical protocols and even in planning and adherence to treatment, with prevention programs and promotion of healthy behaviors (Olvera Méndez and Soria Trujano, 2008).

Azzollini et al. (2015), for their part, mention that working on the mental health of patients with type 2 diabetes mellitus is extremely necessary to reduce the depressive and anxious symptoms that arise in the diagnosis of some patients, which favors coping strategies in The diagnosis improves the quality of life and encourages adequate adherence to treatment.

Pérez Martínez (2010) points out that studying adaptive responses (eg, perception of the severity of the disease, its psychological repercussion, discomfort associated with the



disease, barriers to compliance with treatment, and health behavior) It allows the early identification of risky habits and behaviors that interfere with the proper compliance with treatment and health behavior, aiming at understanding human behavior in the health-disease process.

In this sense, the communication established between the doctor and the patient is crucial to facilitate treatment, a process in which the psychologist can contribute by promoting the acquisition of self-care practices that improve the patient's quality of life (Garza Elizondo et al. , 2003).

Garza Elizondo et al. (2003) consider that to attend type 2 diabetes mellitus requires a health education that focuses on the development of skills, knowledge, abilities, aptitudes and attitudes that allow the patient to responsibly comply with their health care and use the available services appropriately.

For this, Durán, Hernández Rincón, Díaz Nieto and Becerra Aponte (1993), Alpuche (2014), Ortiz et al. (2011) and Serrano Becerril et al. (2012) coincide in pointing out that there must be a multidisciplinary work among various specialists (psychologists, doctors, epidemiologists, sociologists, anthropologists, economists, nurses and social workers) to develop alternative solutions that directly affect high-risk factors and to program interventions from a biopsychosocial model.

Moncada Bueno and Palmerín García (2007) affirm that the psychologist is in the ideal position to combine theoretical information with practice, that is, an intermediate point between research and action. Furthermore, its collaboration with other disciplines allows it to take into account crucial perspectives and elements that are often key to the success of intervention programs.

In addition to this, the psychologist acts as a counselor in the patient's family environment during the diagnosis process, adopting the disease at different stages, giving guidelines for action against emotional disturbances, as well as referral to other social-health support networks or organizations help (Ruiz Adame, 2000). In this sense, Bazán Riverón (2003) proposes that the psychologist in Mexico should be a fundamental part of the team focused on health care, so it should not be just an external professional who provides his services gradually.

## Conclusion

The prevalence of type 2 diabetes mellitus generates a strong physical and mental impact on the patient, which is why health psychology must promote in the psychologist an integral role that allows helping patients in modifying their behavior towards said disease, which must be treated according to the recommendations made by specialists. This professional, in other words, from the behavioral and emotional level, should contribute to the development of an attitude of self-care in patients suffering from this disease. That is, the psychologist, by creating a space where the patient can talk about the feelings generated by the disease, can help him emotionally to face the challenges of type 2 diabetes mellitus.

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<b>Visualización</b>	Principal: Claudio Rafael Vásquez Martínez. IGUAL: Liliana Valdéz Jiménez, Valeria Hernández Romo.
<b>Supervisión</b>	Principal: Claudio Rafael Vásquez Martínez. IGUAL: Liliana Valdéz Jiménez, Valeria Hernández Romo.
<b>Administración de Proyectos</b>	Principal: Liliana Valdéz Jiménez. IGUAL: Claudio Rafael Vásquez Martínez, Valeria Hernández Romo.
<b>Adquisición de fondos</b>	Principal: Claudio Rafael Vásquez Martínez. IGUAL: Liliana Valdéz Jiménez, Valeria Hernández Romo.