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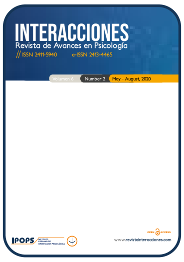

ORIGINAL ARTICLE

Meanings Attributed by a Group of Adult Men to the Experience of Having Type 2 Diabetes Mellitus

Significados atribuidos por un grupo de hombres adultos a la experiencia de tener diabetes mellitus tipo 2

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ABSTRACT

Background: Diabetes is a chronic disease that causes various limitations in the personal, family and social life of the person suffering from it. **Aim:** It was intended to analyze the meaning attributed by a group of adult men to the experience of having diabetes mellitus type 2. The methodology was qualitative with narrative design. The technique to collect information was a free interview. The group of participants consisted of four adult male parents diagnosed with diabetes mellitus type 2. Intentional sampling was used for the selection. The interviews were recorded in audio and literally transcribed. An inductive categorical analysis was performed by means of matrices. There, similarities and differences between participants were identified. **Results:** Among the findings it is highlighted that the impact of the disease is presented in the personal, couple, family and work environment. The main physical consequences are problems of vision, mobility and insensitivity in lower limbs. On a psychological level feeling of sadness. **Conclusion:** The family plays a fundamental role in dealing with the disease, since it constitutes a source of support in adherence to treatment. It was evident in the children of the participants a construction of meanings around the disease that minimizes its impact. The above has the potential risk for risk behaviors to be repeated in later generations.

Keywords: Meaning, Experience, Diabetes Mellitus Type 2, Adult Men

RESUMEN

Introducción: La diabetes es una enfermedad crónica que causa diversas limitaciones en la vida personal, familiar y social de la persona que la padece. **Objetivo:** Se pretendía analizar el significado atribuido por un grupo de hombres adultos a la experiencia de tener diabetes mellitus tipo 2. **Metodología:** La metodología fue cualitativa con diseño narrativo. La técnica para recolectar la información una entrevista libre. El grupo de participantes estaba conformado por cuatro progenitores hombres adultos con diagnóstico de diabetes mellitus tipo 2. Para la selección se utilizó un muestreo intencional. Las entrevistas se grabaron en audio y se trascribieron literalmente. Se realizó un análisis categorial inductivo por medio de matrices. Allí se identificaron similitudes y diferencias entre participantes. **Resultados:** Dentro de los hallazgos se resalta que el impacto de la enfermedad se presenta en lo personal, pareja, familia y ámbito laboral. Las principales consecuencias físicas son problemas de visión, movilidad e insensibilidad en miembros inferiores. A nivel psicológico sentimientos de tristeza. **Conclusiones:** La familia juega un papel fundamental a la hora de enfrentar la enfermedad, ya que se constituye en fuente de apoyo en la adherencia al tratamiento. Se evidenció en los hijos de los participantes una construcción de significados en torno a la enfermedad que minimiza el impacto de la misma. Lo anterior tiene el riesgo potencial para que se repitan comportamientos de riesgo en las generaciones posteriores.

Palabras clave: Significado, experiencia, diabetes mellitus tipo 2, hombres adultos

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BACKGROUND

Diabetes mellitus (DM) is considered a non-communicable chronic disease that is related to high glucose levels due to the consumption of sugars and proteins in excess and the consequent alteration of insulin production in the pancreas. According to the Diabetes Atlas (International Diabetes Federation) (IDF) (2019) report, globally there are 463 million people between the ages of 20 and 79 diagnosed with diabetes with a potential increase of 51% by the year 2045. In Central America and from the south, in the same age range, there are 32 million people with this diagnosis that tends to increase by 55% by the year 2045. The prevalence of the disease in this region and in this same age range is 9.4 %, with Brazil, Paraguay and Chile being the countries with the highest percentage of adults diagnosed with diabetes.

In Colombia it is estimated that 2 million people have been diagnosed; Sedó (2010) refers that older men are usually the ones who report the greatest intensity of symptoms, since it generates feelings of worthlessness, insecurity, social isolation and proximity to death. Due to the above, they do not generate adherence to treatment behaviors (diet, physical and pharmacological exercise). On the other hand, Pérez, Rivas and Martínez (2015) indicate that some adults do not have problems with monitoring the treatment and management of diabetes, but if it causes discomfort, not eating foods to their liking.

There is also the psychological impact. For González, Tinoco and Benhumea (2011), some significant psychological responses are fear, anxiety, anger, depression, feelings of guilt and fear of abandonment by the family. From this we can infer that family support for coping with diabetes is essential. In this regard, Herrera, Quintero and Hernández (2007) argue that the support network allows the person access to information and treatments. For people with diabetes, family and social relationships can change since chronic diseases have an impact not only on the people who suffer from them, but also on their family and social network. These changes can be positive (union and support in times of difficulty), but also negative (social isolation and misunderstanding). Within the review of the state of the art made in this research project, the few studies were observed from a qualitative perspective with a narrative design that allows us to understand the experiences of people diagnosed with diabetes. Therefore, the research objective was to analyze the meaning attributed by a group of adult men to the experience of having type 2 diabetes mellitus to generate an approach to the experience of suffering from this disease and offer reflections on their intervention.

Diabetes Mellitus Type 2

This type of diabetes is characterized by high glucose levels and is defined by the World Health Organization (WHO). (2018). as a chronic disease that occurs when the body does not properly assimilate the insulin that is produced. Insulin is a hormone that regulates the effect of sugar in the blood and that is why alterations in its assimilation produce hyperglycemia that generates, in the long term, serious health problems. For this reason, the diagnosed person must rigorously follow medical treatment that focuses on managing insulin to achieve glycemic control. According to Gil, Sil, Domínguez, Torres and Medina (2013), it is important to explain to the person from the moment of diagnosis that insulin is necessary depending on the evolution of the disease. This is important, since therapeutic education is key to the proper management of the disease.

Family and Illness

The contemporary family is the product of various historical and cultural changes. Currently there are different types of family conformations. As an example, we have the nuclear family, recomposed, single parent and single parent among others. In each family there are particular characteristics associated with the life cycle, communication, roles and hierarchy (Barbosa & Jiménez, 2010). In general, the family is part of the support group that people have and that usually goes through different stages in its process of evolution and permanent change. All of the above implies adaptive challenges for the group and each of its members.

One of the stressors that can affect family harmony is the appearance of a chronic illness. Regarding the issue Rolland (2000) argues that the person with a chronic disease is afraid that his life will end before his life project, since the appearance of a disease interrupts the life project. n some cases the parents are taken care of by their own children. Situation that can generate intergenerational family conflicts (Ruiz, 2012; Placeres & León, 2011). Adult men, when perceiving the impact of the disease in their daily life, give it a particular meaning (it varies from person to person) that is born from a conglomeration of family interactions, socio-cultural beliefs and individual particularities. According to Heredia and Pinto (2008).

METHOD

Type of Research and Design

The research is oriented from the qualitative approach. This is because it is intended to track reality from the perspective of the participants. The research interest is centered on meaning, narration, understanding and action (Rodríguez, 2011).

As for the design, it is narrative, which implies the use of data collection techniques such as individual and group interviews. There people can relate their experiences spontaneously. For Barbosa, Reyes and Escobar (2009), from the moment that people narrate their life experiences, they update their story and the experiences return as images. Fernández, Hernández and Baptista (2014), argue that narrative designs have to do with the succession of events, phenomena and processes. Thoughts, feelings and interactions are involved there. The above arises thanks to the direct narration of the protagonists. Finally, Cardona and Alvarado (2015) add that from this perspective reality is understood as a social construction. Due to the above, the approach to the world is mediated by the subjects and their experience.

Technique for Gathering Information

The technique used was the unstructured interview, which seeks the information that is needed through defined topics or focuses. Díaz, Torruco, Martinez and Varela (2013) state that this type of interview is informal and flexible, whereby it adapts to contextual conditions. However, this does not prevent us from delving into the subject and detailing relevant aspects for the research. Through the question and answer, the life reconstruction of the interviewed person is achieved and in his story the meaning that the person has about an experience or topic addressed is reflected, in this case the experience of suffering from Type 2 Diabetes Mellitus.

Participants

Four participants were selected for this research. The inclusion criteria consisted of: being adult men (50-70 years of age), having a diagnosis of type 2 diabetes mellitus, being parents and having at least secondary education; This population was selected since, as reported by Sedó (2010), older adults may suffer the effects of diabetes with greater intensity; Additionally, type 2 diabetes mellitus is more recurrent in adults than in any other age group. (Palacios – Barahona, Arango-Posada, Ordoñez, Alvis-Guzmán. 2019).

The demographics of the participants are described below. The above taking into account the principle of confidentiality.

Process

At the beginning, 12 potential participants belonging to a research project of the Universidad Antonio Nariño in Bogotá on diabetes prevention were located. After conducting an exploratory interview, the inclusion criteria were established and the four were finally selected for open interviews. The technique for selection was intentional sampling. Two meetings were held for the interview. In the first, the objectives and justification of the study were made explicit. After generating empathy and resolving concerns about participation in the work, a second meeting was held to sign the informed consent and interview. The interview was audio recorded for later literal transcription and analysis. The analysis developed is of the inductive categorical type. For this purpose, meaning matrices were used where the fragments of the most recurrent interviews were organized within the stories of the interviewees. With this material, the categories that allowed the analysis to be carried out were inferred. These categories were: Meanings attributed to the diagnosis and acceptance of the disease, meanings attributed to the psychological consequences and adherence to treatment; meanings attributed to changes in relationships with children and partner. Finally, meanings attributed to limitations in sexual and work life.

RESULTS AND DISCUSSION

Meanings Attributed to the Diagnosis and Acceptance of the Disease

This category refers to the medical and environmental history of the disease. Also, to the physical impact generated by the disease. From this, the experiences associated with the symptoms and the limitations that this disease generates in people appear.

Most of the participants mentioned a history of diabetes in their family history. However, they do not associate this fact with the development of this disease in their personal history. Luis's story (3 years diagnosed): My brothers told me that my grandmother died of diabetes. Santiago (17 years diagnosed): My dad died of diabetes and so did my brother. When I found out that they had this disease, I continued everything calm. One in good health does not think that one can get sick with diabetes.

Regarding environmental antecedents, the participants recognized eating habits that are characterized by unhealthy food intake. Alejandro (1 year and six months diagnosed): I think I got sick from eating junk food on the street. Fried and sodas. Santiago (17-year-old diagnosed): I practically ate at odd hours, but now I can't eat at set times either. Likewise, family biological antecedents, as well as eating habits are recognized as determining elements in the onset of the disease. According to Colombie, Socca, Rivas and Borrego (2016): "Family history of diabetes, hypertension (HT), obesity and environmental factors play an important role in the emergence and development of the disease" (p. 125). For participants, the first symptoms of the disease are the ones that raise the alarm about the situ-

Table 1. Demographic Data of the Participants

	Pedro	Alejandro	Luis	Santiago
Age	65 years	57 years	57 years	65 years
Education level	Bachelor	Bachelor	Bachelor	Bachelor
Occupation	Unemployed	Seller	Driver	Driver / Independent
Diagnosis Time	20 years	1 year and six months	3 years	17 years
Children's Age	23,30,33 and 35	34,32,26,23 and 22	118 and 19 years	21,22,28,37 and 39
Lives with	Mother	Wife	Wife and two children	Daughters and their grandchildren

ation, but it is as a result of the diagnosis that one becomes aware that diabetes is a disease that puts health at risk. Pedro (20 years diagnosed): I was working in Yopal, that day we went to eat a bite, everything was fine, but then I felt bad. I was very thirsty for 20 days. I couldn't go to the bathroom and I didn't feel like eating. I thought lunch was spoiled. Alejandro (1 year and six months diagnosed): Diabetes is totally silent; this disease does not manifest itself with anything. One day he wakes up. You feel dizzy, you've never felt that dizziness. I felt totally dizzy and also very thirsty, I didn't know why, so they went to hospitalize me. Regarding the topic Sedó (2010) explains that diabetes is usually asymptomatic. You can have high blood glucose levels without presenting symptoms. The reports of the participants show the general ignorance of DM2 in terms of characteristics, predisposing factors and consequences. The consequence of this is that they do not act preventively despite the history of the disease in the family. In the same way, the diagnosis of the disease takes them by surprise. Alejandro (1 year and 6 months diagnosed): It was surprising, me and my wife were surprised. They had told her when I had cancer that I was pre-diabetic and well, she took good care of herself for two or three months, but she was cured. And when they tell me that I already have diabetes, we didn't know what to do. Luis (3 years diagnosed): When I found out I was very scared, I told my wife, she was also very scared, and we were not aware of the disease. Regarding the limitations generated by the disease, the participants recognize and accept them; These limitations are associated with mobility problems, decreased vision and numbness in the lower limbs. Luis (3 years diagnosed): Previously I ran and had strength, now not. I have felt deterioration in my vision and at times I get the diabetic foot. Pedro (20-year-old diagnosed): Now I can't walk a lot or stay standing. Sometimes I am walking and suddenly I fall with my cane. Also, I have had various skin complications because I don't have that sensitivity from before. Sometimes I can't feel my feet.

Meanings Attributed to Psychological Consequences and Adherence to Treatment

In this category appear experiences related to psychological discomfort and also the difficulties of the participants to achieve adherence to the treatment adequately. Family support and religious beliefs are also highlighted.

The psychological consequences are associated with a greater recurrence of feelings of sadness and loneliness: Alejandro (1 year and 6 months diagnosed): The psychological ones, thinking about what is happening in my life and being afraid of dying. Santiago (17 years diagnosed): Yes, it makes me very sad, I feel down, but I try to control myself. According to different authors (Rolland, 2000; Jiménez & Dávila, 2007), psychological reactions of sadness, fear of death, loneliness and even depression are usually common in individuals with chronic diseases; To this it can be added that the treatment of diabetes requires a significant change in life behaviors, which causes emotional reactions of anguish and frustration. (Canales & Barras. 2014).

The main source of information on DM2 are dietitian doctors, who provide essential guidelines to obtain greater adherence to treatment. Participants mention following medical recommendations such as taking and applying medications, nutritional care and physical activity. Paradoxically, they show difficulties in following the same indications. This is due to the fact that some people self-medicate or handle negative beliefs regarding the medications prescribed by the doctor. Pedro (20 years diagnosed): I get up and make breakfast, then half-nines, lunch, I take ounces, around 10:00 am I take insulin, I apply 10 cm of insulin to my stomach and a lot of nutritional care. Luis (3 years diagnosed): Well the doctors told me to take care of my food. From there I have come judicious. That's why I have a coffee with whole wheat bread, but sometimes I think that I would rather die full than hungry. Santiago (17 years diagnosed): I did not want insulin and it lasted for three months, I administered insulin and mixed herbs. I stopped it myself, but I kept taking four pills. In relation to compliance and difficulties with adherence to treatment in parents, Alves, Castro, Ribeiro and Faustino (2007) state that for there to be a favorable evolution in the treatment of diabetes, there must be self-regulation of behavior.

Hoyos, Arteaga & Muñoz (2011), identify, in their research on factors that limit treatment in diabetic patients, emotional, food and religious perceptions as a turning point in the treatment of diabetics; At the same time, they propose the understanding of sociocultural beliefs as part of the interventional process to increase the effectiveness of the treatment. However, despite all of the above, the study participants are motivated to continue fighting the disease. What is described below has more to do with their family than with their life projects or themselves.. Luis (3 years diagnosed): I take my medications for my children and my wife, my family. I want to be okay for them.

Meanings Attributed to Changes in Relationships with Children and Partner

In this case, experiences associated with changes in family interactions that have to do with the appearance of the disease are evidenced. Among these changes is the supportive reaction of the children of the participants. Likewise, the role of the couple is observed regarding adherence to treatment and when assuming hierarchical responsibilities.

In the participants' narratives the theme of the individuation of children and the formation of new homes predominates. Which has repercussions in the construction of a new family dynamic, Pedro (20 years diagnosed): I am not saying that my children do not collaborate with me, but if I feel as if I am asking for alms and the times I have gotten sick, I tell my daughter. She is by my side. My children have to answer for their home, she wants to be with me, but she can't. Luis (3 years diagnosed): Since the disease we continue to share the same, we do not share the same food, but the other things do. My children call and are waiting on me. Although they already have their homes. Santiago (17 years diagnosed): I have been far away from my younger daughters; they are already making their lives. The children of the participants withdraw due to their responsibilities and this withdrawal possibly leads to misinformation about a disease that is potentially heritable. Alejandro (1 year and 6 months diagnosed): I feel that for them everything related to the disease is normal, perhaps because they think that cancer was harder than diabetes, and since I came out of cancer, they believe that I can get out of this disease , I don't need your support. A construction of meanings around the disease that minimizes its impact is evidenced in the children of the participants. This can influence the repetition of risk behaviors in later generations. In this case, the disease can be inherited as well as the beliefs and behaviors associated with the problem.

For Rolland (2000) the asymptomatic of a chronic disease reinforces confusion and disorientation in various ways. This makes denial easier for people with the disease and their families to use. The result is the minimization of the effects of the disease.

The partner of the participants is also an important source of support for treatment management. Alejandro (1 year and 6 months diagnosed): He has changed a lot; he is out of the ordinary. Life as a couple changed. Now we talk a lot about our diseases and therefore also about the company, but more about the disease. She has always been with me and more in my illnesses. Luis (3 years diagnosed): At the beginning of the disease, everything began to change. I have tried to control my illness to share with her. I have learned to live with the disease, I think we all do that and more because she is who is with me. Sometimes she has to be responsible for imposing rules and assuming certain responsibilities that previously corresponded to me. Due to the limitations generated by the disease, changes appear regarding the distribution of responsibilities and management of authority. In most cases, it is the partner of the participants who assumes responsibilities and authority to equalize the family hierarchy. According to Mendizábal and Pinto (2006), it is important that within family interactions there is a clear hierarchy. This regardless of the vital moment and the situation faced. All of the above is related to what was expressed by Hernández (1997), who points out that the true family challenge lies in facing non-normative stressors, such as chronic disease, reorganizing itself as a form of family resource that ultimately allows the family to adapt to new situations.

Attributed meanings to limitations in sexual and work life

In this category, the most significant limitations that the participants express in the experience of having DM2 are condensed. Particularly in sex and work life. Experiences associated with physical and psychological difficulties are highlighted

Sex life in the couple decreases significantly. This is linked to the physical consequences of the disease. There are observed alterations in the control of the body and psychological consequences such as depression that reduces the desire for the other person. Pedro (20 years diagnosed): You lose everything, for example, you don't feel like being with her anymore. That is instantaneous and the battery does not work. The first thing they think is that you have another person. Luis (3 years diagnosed): There are times when everything changes with the couple. Before I was normal with my partner. Before we had relationships three times a month and now once and that. Alejandro (1 year and 6 months): Life as a couple is out of the ordinary, it is a very drastic change. There is no more of that between us. For Lendon and Castelo (2013),

There is also evidence of deterioration in the workplace, since performance is not the same. The above due to physical limitations and the feeling of social isolation. Alejandro (1 year and 6 months): As long as I work, I can continue with my normal life. Commerce requires me to continue and every day it asks me for more products. This expands my micro business and makes me more profitable. But I also have to ask someone to help me at work. It's a limitation, I can't push myself. Luis: Diabetes makes you sleepy, I try to sleep at times. Santiago (17 years diagnosed): At the beginning, yes, I had a little more than two years that I could not work. There everything decayed, automatically I stayed at zero. But I continued.

CONCLUSION

A lack of knowledge of diabetes and a lack of recognition of the risk factors that make its development possible are observed within the participants' reports. This despite having a family history of diabetes. As the main physical consequences, the participants identified problems with vision, mobility and insensitivity in the lower limbs. On a psychological level feeling of sadness and fear towards the development of the disease.

On the other hand, the family plays a fundamental role when facing the disease, since it constitutes a source of support for adherence to treatment. The partner of the participants happens to have the greatest hierarchical and sometimes economic burden. A construction of meanings around the disease that minimizes its impact is evidenced in the children of the participants. This has the potential risk for risk behaviors to recur in subsequent generations.

In addition, the sexual life in the couple decreases significantly. This is linked to the physical consequences of the disease. There are observed alterations in the control of the body and psychological consequences such as depression that reduces the desire for the other person. There is also evidence of deterioration in the workplace, since performance is not the same. The above due to physical limitations and the feeling of social isolation.

Regarding the limitations of the study, the time established for the development of the project did not allow locating more participants. Likewise, there were no female participants to be able to contrast possible differences and similarities by gender and role within family relationships.

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CONFLICT OF INTERESTS

The authors state that there were no conflicts of interest when writing the manuscript.

REFERENCES

Alves, J., Castro, C., Ribeiro, H. & Faustino, H. (2007). La incertidumbre en la enfermedad y la motivación para el tratamiento en diabéticos tipo 2. *Revista Latino Enfermagem, 15(4), 1-10.* Recuperado de http://www.scielo.br/pdf/rlae/v15n4/es_v15n4a09.pdf

Atlas de Diabetes (International Diabetes Federation) (IDF) (2019). IDF Diabetes atlas. Novena edición.

Barbosa, A. & Jiménez P. (2010). Significados asignados al establecimiento de vínculos afectivos y la posible conformación familiar por parte de jóvenes adultos homosexuales. *Revista Vanguardia Psicológica*, 1(1), 33-51.

Barbosa, A., Reyes, S. & Escobar, M. (2009). Narrativas dominantes de personas privadas de la libertad en torno al concepto de familia. *Umbral Científico*, (14), 170-180.

Canales & Barra, E. (2014). Autoeficacia, apoyo social y adherencia al tratamiento en adultos con diabetes mellitus tipo II. Psicología y salud. Vol 24 Num. 2: 167-173. Recuperado de: http://psicologiaysalud.uv.mx/index.php/psicysalud/article/view/922

Cardona, A. & Alvarado, S. (2015). Investigación narrativa: apuesta metodológica para la construcción social de conocimientos científicos. *Revista Ces psicología, 8(2), 171-181.* Recuperado de http://revistas.ces.edu.co/index.php/psicologia/article/view/3022/2427

Columbíe, Y., Soca, P., Rivas, D. & Borrego, V. (2016). Factores de riesgo asociados con la aparición de diabetes mellitus tipo 2 en personas adultas. *Revista Cubana de endocrinología 27(2), 123-133*. Recuperado de http://scielo.sld.cu/pdf/end/v27n2/end02216.pdf

Díaz, L., Torruco, U., Martinez, M. & Varela, M. (2013). La entrevista, recurso flexible y dinámico. *Revista investigación en Educación Médica, 2(7), 162-167.* Recuperado de https://www.redalyc.org/pdf/3497/349733228009.pdf

Fernández, R. Hernández, C. & Baptista, M. (2014). *Metodología De La Investigación.* Recuperado de http://observatorio.epacartagena.gov.co/wp-content/uploads/2017/08/metodologia-de-la-investigacion-sexta-edicion.compressed.pdf

Gil, L., Sil, M., Domínguez, E., Torres, P. & Medina, J. (2013). Guía de práctica clínica diagnóstico y tratamiento de la diabetes mellitus tipo 2. *Revista Med inst seguro soc, 51(1) 104-119.* Recuperado de https://www.medigraphic.com/pdfs/imss/im-2013/im131o.pdf

González, N., Tinoco, A. & Benhumea, L. (2011). Salud mental y emociones en pacientes con enfermedades crónico- degenerativas. Un acercamiento a la diabetes mellitus tipo 2. *Revista Espacios públicos*, *14(2), 258-279*. Recuperado de http://www.redalyc.org/pdf/676/67621319013.pdf

Heredia, J. & Pintó, B. (2008). Depresión en diabéticos: un enfoque sistémico. *Revista Ajayu, 6(1), 22-41*. Recuperado de http://www.scielo.org.bo/pdf/rap/v6n1/v6n1a2.pdf

Hernández, A. (2009). *Familia, ciclo vital y psicoterapia sistémica breve*. Bogotá: Búho.

Herrera, L., Quintero, O. & Hernández, (2007). Funcionalidad y red de apoyo familiar en pacientes diabéticos tipo 2 servicio de endocrinología Iahula Mérida. *Revista Academia, 6(12), 62-72*. Recuperado de http://www.saber.ula.ve/bitstream/handle/123456789/27301/articulo6.pdf;jsessionid=04E4AD2DE1024D0956270EA7BCDAA4BF?sequence=1

Hoyos, T., Arteaga, M &Muñoz, M. Factores de no adherencia al tratamiento en personas con diabetes Mellitus tipo 2 en el domicilio. La visión de un cuidador. *Invec. Educ. Enferm.* 29(2): 194-203. Recuperado de: http://www.scielo.org.co/scielo.php?script=sci_abstract&pid=S0120-53072011000200004

Jiménez, C. & Dávila, M. (2007). Psicodiabetes. *Revista Avances en psicología Latinoamericana, 25(1), 126-143.* Recuperado de http://www.scielo.org.co/scielo.php?script=sci_arttext&pid=S1794-47242007000100012

Lendon, L. & Castelo, E. (2013). Afrontamiento al distres relacionado con la disfunción eréctil en varones con diabetes mellitus tipo 2. *Revista Cubana endocrinología, 24 (3), 242 -257.* Revisado de http://scielo.sld.cu/pdf/end/v24n3/end02313.pdf

Mendizabal, O. & Pinto, B. (2006). Estructura y diabetes. *Revista Ajayu, 4(2), 191-211*. Recuperado de http://www.scielo.org.bo/pdf/rap/v4n2/v4n2a3.pdf

Organización Mundial de la Salud (OMS). (2018). Recuperado de: https://www.who.int/es/news-room/fact-sheets/detail/diabetes

Palacios-Barahona, U., Arango-Posada, M., Ordoñez, JE & Alvis-Guzman, N. (2019). Calidad de vida de pacientes con diabetes tipo 2 en Colombia. Revisión sistemática y metaanálisis acumulativo. *Rev. CES Psico.* 12(3), 80-90. Recuperado de: http://www.scielo.org.co/pdf/cesp/v12n3/2011-3080-cesp-12-03-80.pdf

Pérez, Z., Rivas, V. & Martínez, A. (2015). Percepción del apoyo familiar y dificultades relacionadas con la diabetes en el adulto mayor. *Revista Horizonte sanitario, 14(1), 14-20.* Recuperado de https://biblat.unam.mx/es/revista/horizonte-sanitario/articulo/percepcion-del-apoyo-familiar-y-dificultades-relacionadas-con-la-diabetes-en-el-adulto-mayor

Placeres, J. & León, L. (2011). La familia y el adulto mayor. *Revista Med. Electrón, 33(4), 472 – 483.* Recuperado de http://scielo.sld.cu/pdf/rme/v33n4/spu10411.pdf

Rodríguez, J. (2011). Métodos de investigación cualitativa. *Revista de la corporación Internacional para el Desarrollo Educativo, (8), 1-34.* Recuperado de http://www.cide.edu.co/doc/investigacion/3.%20metodos%20de%20investigacion.pdf

Rolland, J. (2000). *Familias, enfermedad y discapacidad. Una propuesta de la terapia sistémica.* España, Barcelona. Gedisa.

Ruiz, J. (2012). Aspectos biopsicosociales que incides en la salud del adulto. *Revista Cubana de medicina general integral, 28(2), 79-86.* Recuperado de http://scielo.sld.cu/pdf/mgi/v28n2/mgi09212.pdf

Sedó, P. (2010). Percepciones sobre la diabetes y su padecimiento en personas adultas mayores diabéticas y familiares en un área urbana de Costa Rica. *Revista Anales en Gerontología, 6(6), 99-112.* Recuperado de https://dialnet.unirioja.es/servlet/articulo?codigo=6140284