Doi: 10.4025/psicolestud.v21i1.29792

SOCIAL REPRESENTATIONS IN THE CONTEXT OF DIABETES MELLITUS

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ABSTRACT. This study aimed to apprehend the social representations elaborated by people who have diabetes about the disease. As many as 31 people, with ages ranging from 34 and 76 years old (M = 55.68, SD = 11.6), who responded to a socio-demographic questionnaire and depth interview. The data were submitted to the Alceste software and analyzed using descriptive statistics and lexical analysis. The results showed that the social representations were focused on the ignorance of diabetes, highlighting the surprise of diagnosis, their representations, were also anchored in nutritional and emotional factors which were permeated by negative emotions. Participants who used insulin have ratified responsibilities notions, directed to disease consequences, such as the case of the limbs amputation, those who did not used insulin described the disease linked to the triad of treatment. The results showed the importance of an interdisciplinary approach that focuses on the psychosociological support aimed at developing strategies that can be adopted to control and diabetes care.

Keywords: Diabetes Mellitus; social representation; social psychology.

REPRESENTAÇÕES SOCIAIS NO CONTEXTO DO DIABETES MELLITUS

RESUMO. Este estudo objetivou apreender as representações sociais, elaboradas por pessoas que tenham diabetes, acerca da doença. Participaram do estudo 31 pessoas com idades entre 34 a 76 anos (M= 55,68; DP= 11,6), que responderam a um questionário biossociodemográfico e à entrevista em profundidade. Os dados foram processados pelo software Alceste e analisados por meio da estatística descritiva e análise lexical. Os participantes apontaram em suas representações sociais a falta de conhecimentos acerca do diabetes, destacando a surpresa do diagnóstico, e suas representações, também, estiveram ancoradas em fatores nutricionais e emocionais, os quais foram permeados por emoções de cunho negativo. Os participantes que utilizavam insulina ratificaram noções de responsabilidades, voltadas para consequências da doença, como é o caso da amputação de membros, o grupo que não a utilizava descreveu a doença atrelada à tríade do tratamento. Os resultados apontam para a importância de uma abordagem interdisciplinar que enfoque o suporte psicossociológico, voltado para a elaboração de estratégias que possam ser adotadas frente ao controle e cuidado do diabetes.

Palavras-chave: *Diabetes Mellitus*; representação social; psicologia social.

REPRESENTACIONES SOCIALES SOBRE LA ENFERMEDAD DE PERSONAS CON DIABETES MELLITUS

RESUMEN. Este estudio tuvo como objetivo comprender las representaciones sociales desarrolladas por personas que tienen diabetes acerca de la enfermedad. Participaron 31 personas con edades entre 34 y 76 años (M = 55.68, SD = 11,6), que contestaron a un cuestionario sociodemográfico y entrevista en profundidad. Se analizaron los datos mediante estadística descriptiva y análisis léxico. Los participantes señalaron en sus representaciones sociales la ignorancia de la diabetes, destacando la sorpresa de diagnóstico, sus representaciones, también estaban anclados en

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los factores nutricionales y emocionales que fueron permeadas por las emociones negativas. Los participantes que usaron insulina han ratificadas responsabilidades nociones centradas en las consecuencias de la enfermedad, como el caso de la amputación de miembros, los que no usan la insulina describieron la enfermedad guiado por sus aspectos generales relacionados con la tríada de tratamiento. Los resultados apuntan a la importancia de un enfoque interdisciplinario que se centra en el apoyo psicosocial dirigido a desarrollar las estrategias que se pueden adoptar para control y cuidado de la diabetes.

Palabras-clave: Diabetes Mellitus; representación social; Psicología social.

Introduction

Diabetes Mellitus (DM) is considered to be a problem of public health both in developed and in emergent countries, due to its high number of incidence and its psychosocial impacts, which could be related to disabling capacities that compromise productivity, quality of life of bearers of the disease, besides the expensive prices of treatment and its complications. This is a chronic non-transmissible disease caused by hereditary and environmental factors. Diabetes is caused by relative or absolute deficiency in secretion and/or action of insulin, which leads to the accumulation of glucose (sugar) (Stuhler, 2012; Rigon, Rossi, & Coser, 2007).

According to the American Diabetes Association (ADA) the normal level of glucose in human blood is up to 100 mg/dL; above this level, a person could present hipo- or hyperglycemic crises (ADA, 2015). The disease starts and develops silently with a dysfunctional pancreatic behavior. It hosts a heterogenic number of metabolic diseases associated to complication, dysfunction and organs insufficiencies that harmfully affect the following systems: ophthalmic, renal, neurologic and cardiovascular (Rodríguez, Meneses, Toboso, & Moreno, 2012).

The main symptoms of diabetes are: thirstiness (polydipsia), excess of urine (polyuria), hunger (polyphagia), and loss of weight. Other symptoms are: somnolence, spread out pains, prickliness, painful tiredness in legs, cramps, angriness, indisposition to work, cloudy vision, physical and tiredness (Rodríguez et al, 2012).

According to research conducted in the field, there tends to be an increase in the levels of incidence and prevalence of diabetes due to the aging o the population, to the urbanization of societies, to economic development, and to a sedentary life style and eating habits that predisposes to body fat accumulation (Oliveira & Vencio, 2014; Whiting, Guariguata, Weil, & Shaw, 2011).

According to the most recent data from International Diabetes Deferation (IDF), there are currently approximately 382 million people in the world who have diabetes, factor responsible for the death of more than 5,1 million of people in 2012 (IDF, 2013). In Brazil, there are approximately 12 million carries of diabetes, and everyday emerges 500 new cases. According to data from Brazilian Society of Endocrinology and Metabology – Region of Paraíba (SBEM-PB), it is estimated that there exist 135 thousand of diabetics in the state of Paraíba; out of this number, 37,5 thousand are in João Pessoa. Based on this data, World Heath Organization estimates diabetes should be the seventh main cause of deaths in 2030 (IDF, 2013).

It is known that living with diabetes requires a complex adjustment to a new life style, which involves therapeutic practices, a change in eating habits, control of glycemic levels, and a continuous monitoring from a multidisciplinary team of physicians, aiming at a healthy life preventing possible acute and chronic complications (Tavares et al, 2011).

Therefore, the way people perceive their life condition influences the overall control they have over their state of health/disease, becoming important to understand how people with diabetes symbolize the experience produced by this reality, given that understanding the construction of this collective thinking could contribute to giving more visibility to this phenomenon and, therefore, help carriers of diabetes in their therapeutic practices (Coutinho & Saraiva, 2013).

Given these premises, this paper aimed at apprehending social representations about diabetes elaborated by people who carry the disease. Important to the development of this study was the foundation from Social Representations Theory (SRT).

> *Social representations must be seen as a specific way of comprehending and communicating what we already know. They occupy a privileged position, at some point among concepts, that have as their gol abstracting meaning from the world and introducing in it order and perceptions, which reproduce the world in meaningful ways (Moscovivi, 2011, p.46).*

The genesis of the construction of social representation is founded in two processes: *anchoring and objectification*, which have, at the same time, a social and a cognitive nature, allowing the transformation of what is not familiar into something that is familiar (Moscovivi, 2012). The process of anchoring directs the memory to the interior, either by searching for things, events and people, which memory may recognize as prototypical, or may recognize naming the same, by means of comparison and interpretation. In turn, the process of objectification reproduces an unknown concept from reality, transferring it to a visible and sensible level; it concerns the form in which constitutive elements of representation are organized and the paths whereby they acquire matter becoming expressions of a reality thought as natural (Coutinho & Saraiva, 2013; Moscovici, 2012).

Access to social representations is only possible through and understanding of the forms used by individuals to create, transform and interpret a problem attached to reality, as well as acknowledging their thoughts, feelings, perceptions and experiences of shared life, according to the social classes and institutions to which they belong (Coutinho, 2005).

Social representations are formed by systems of interpretation that conduct the relationship between subjects and the world. Therefore, the study of social representations about diabetes could result in a further comprehension of what is the treatment given to the multidimensionality of this object by people who carry diabetes mellitus. It would also lead to the apprehension in the representational field that shelters information images, beliefs, values, opinions, and cultural and ideological elements present in the discourse about this disease (Saraiva, 2010).

Following Ribas, Santos, Zanetti and Zanetti (2013), social representation bare an ample application in areas related to health, especially in chronicle conditions, such as diabetes mellitus. In their framework, psychosocial aspects of the disease are put on focus. These aspects have been more and more used in clinical practice, mainly in order to understand factors related to the origin and the metabolic control of patients with diabetes. In this sense, this approach analyses people in their integral needs, considering them as biopshycosocial beings.

As a means for verifying the literature on this matter, it was performed a search in the following databases considering publication from the past 10 years (from January 1st, 2004, to December 31st, 2014): SciELO, Medline/pubmed, SCOPUS, Bireme, and Capes Plataform. The terms of the research comprised a combination of the key words “social representation” and “diabetes”, and their correspondents in English and Spanish. It were considered only articles about social representations of diabetes.

The search reveled a total of 12 articles on the topic, out of which five fell within the inclusion criteria, for example: papers on diabetes, diabetic foot, and the relationship health/disease (Mantovani, Fegonesi, Pelai, Savian, & Pagotto, 2013; LeClair, Marquis, Villalon, & Strychar, 2009; Coelho, Silva, & Padilha, 2009; Péres, Franco, Santos, & Zanetti, 2008; Torres-López & Sandoval-Díaz, 2005). It should be noted that, in spite the number of studies previously cited here, the literature available on the psychossical approach to diabetes is still incipient and more frequent in the area of Nursing, with little emphasis on Psychology (Coelho et al., 2009; Péres et al., 2008).

The formulation of the shared knowledge about diabetes mellitus could contribute, following Coutinho (2005), to determining feelings, sensations, knowledge, and beliefs about this disease, as well as to identifying how social actors who have been diagnosed with the disease face the hindrances caused by it. Furthermore, such formulation could lead to the verification of which aspects are more meaningful in the illness-treatment process, and which behaviors are to be adopted facing this problematic. SRT facilitates the approximation to the subjectivities of the individuals, providing the ground for promotion and prevention of health with respect to this chronic disease.

Method

Type of study

This is a descriptive field research, of quantitative and qualitative nature, and anchored in a psychosocial approach.

Participants and place

For this research, 31 people between the ages of 34 and 76 years old (M = 55, 68; DP = 11,6) participated. In this group, 26 were females, 18 married, 28 had completed elementary school, 16 reported not using insulin, and all of them have been diagnosed with diabetes for a period of time between 1 and 33 years (M=12, 19; DP=9.69). The sample is of the type non-probabilistic and by convenience. The inclusion criteria were: (i) being 18 years old or older; (ii) having been diagnosed with diabetes mellitus.

This research was carried out in an institution related to the Public Health System (SUS) that treats people with diabetes, located in the city of João Pessoa, Paraíba, Brazil.

Instruments

In order to obtain the data, it was used a Biosocialdemographic Questionnaire and an In-depth Interview. The first instrument provided the profile o the participants, with information such as age, gender, degree, civil state, time of diagnostic, and usage of insulin.

The interview was conducted with the following directing: “Please, I would like you to talk about what you know about Diabetes Mellitus, including your feelings, sensations and beliefs”. This instrument allows the interviewee to freely articulate about the subject matter, with no previously answers or conditions establishes by the interviewer, which allows a more in-depth intersubjective engagement between the individual and the subject matter, revealing their daily experiences, affective and existential matters, among others, elaborated based on common sense language. These are essential factors in order to determine social representations (Vieira, 2012; Minayo, 2007).

Procedures and data collection

This research was approved by the Ethics Committee at the Federal University of Paraíba – CEP/CCS, under the protocol number 914.880. During its realization, it has been respected all ethical conditions establish by the National Council of Health, created under the Resolution 466/2012, and with assigned constitution by the Resolution 246/97.

After the approval, it was established contact with the directory board of the chosen institution, where the researchers presented a letter of intent containing the goals and the importance of the research being developed. Next, data was collected individually, at CAIS, where patients waited for their consultation. All participants signed a letter of free consent, and they were informed of the voluntary character of this research, and were reassured as to the anonymity of their identity. The number of participants was defined according to saturation criterion proposed by Sá (1998). According to this criterion, the interviews could be terminated at the moment in which subjects start to repeat thematic content. The total amount of time of application of both instruments is of 35 minuets.

Procedures for analyzing the data

The 31 interviews were recorded and fully transcribed, forming the corpus processed by the software Alceste (AnalyseLexicale par Contexted’un Ensemble de Segments de Texte) developed by Reinert in 1986 (Saraiva, Coutinho, & Miranda, 2011).

This software performs a lexical analysis by means of statistical procedures, carried out in four steps: (i) Step A, recognition of UICs (Units of Initial Context) that correspond to the amount of interviews and the separation of the texts in similar fragments, UECs (Units of Elementary Context); (ii) Step B, definite division and grouinf of UECs according to word similarity, and application of Descent Hierarchic Classification (DHC); (iii) Step C, stable description of classes of UECs, and the dendrogram created by the DHC illustrating the relations among classes based on characteristic vocabulary (lexicon) and fixed variables. The statistical significance of words inside classes is measured by a frequency (f) and by chi-squared statistic (); (iv) Step D, complementary calculation and contextualization of vocabulary typical of each class (Saraiva et al., 2011).

The data from the questionnaire was processed with the software Statistical Package for Social Science, version 19.0 (SPSS-19.0), and was analyzed according to the descriptive static, observing the frequency, percentage, average score and standard deviation. It should be noted that in order to use the variables age and time of treatment in Alceste, they were grouped according an interval of 10 years.

Results and discussion

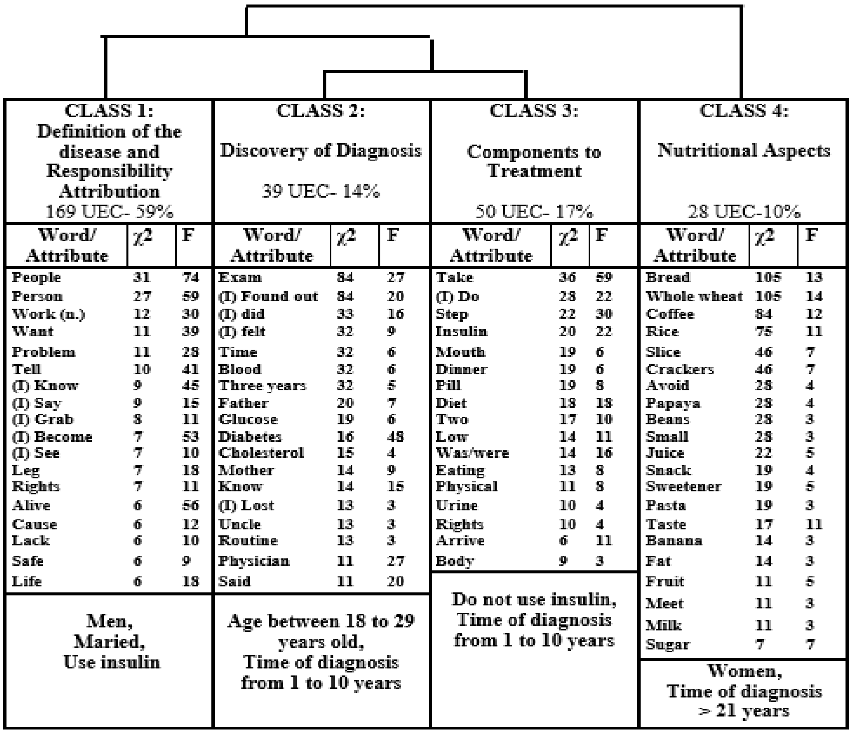
The data from the 31 interviews processed by the software Alceste originated a corpus of 31 UICs, totalizing 19,246 tokens, out of which 2,509 are distinct words. After reducing the words to their stems, it was founded 419 analyzable stems and 392 UECs. The DHC retained 73% of the total UECs in the corpus, which were distributed in four different classes, as shows Figure 01.

In the Dendrogram, denominated “Social Representations about Diabetes Mellitus”, it is shown a first partition composite of four distinct classes, grouped into two subcorpora. The first, located to the left, formed of classes 1, 2, and 3, resulting in a conceptual field of “Aspects related to diabetes”, which, in turn, is subdivided into class 1, “Definition of the disease and attribution of responsibilities”, and into classes 2 and 3, conceptualizing “Diabetes: diagnosis and treatment”. The other subcorpus consists of class 4, “Nutritional aspects”. The grouping of subcorpora in the left of the dendrogram results from a common textual portion, o which allows the inference that these classes display complementary meanings, which differs them from class 4.

Class 1, “Defining the disease and attribution of responsibility”, is formed of 169 UECs (59%), contributing more significantly to the composition of the dendrogram with words and stems in the interval and meaningful frequency between $\chi 2 = 31$; f= 74 (*people*) e $\chi 2 = 6$; f= 18 (*life*). The variables – attributes that most contributed to the class, were: male, married, who uses insulin. The content of this class is relates the concept of diabetes to those of responsibility, obligation and consciousness towards the fulfillment of the treatment, according to what was reported by the participants.

> *I don’t know much about diabetes … it is a complicated, silent disease … I know I don’t take care of myself … the treatment demands a lot of discipline, it is a tough life for people who have diabetes … becoming aware that tomorrow you could lose a finger, a leg or an arm, go blind, e try to let go of these things and go jogging, walking, running … I can’t complain about the medical monitoring, it is not that it lacks orientation, it is not use, the doctor is doing her job, warning, guiding me, telling me what I can and what I can’t … there is way of living with diabetes, it is just up to me.*

According to some narratives from participants with the aforementioned profile, it can be noted that the concept of diabetes in common sense knowledge is analogous to the concept of erudite knowledge, since diabetes is considered to be a complex and silent disease, whose treatment requires discipline, even thou, most of the time, these people do not have the conscience to pursue it, unless they realize that in some future they might have to deal with complications. The most tangible consequence to married men who use insulin is the fear of losing a member of the body, such as a finger, a leg, an arm, or even of developing sight problems.



CLASS 1:			CLASS 2:			CLASS 3:			CLASS 4:		
Definition of the disease and Responsibility Attribution			Discovery of Diagnosis			Components to Treatment			Nutritional Aspects		
169 UEC- 59%			39 UEC- 14%			50 UEC- 17%			28 UEC-10%		
Word/ Attribute	χ2	F	Word/ Attribute	χ2	F	Word/ Attribute	χ2	F	Word/ Attribute	χ2	F
People	31	74	Exam	84	27	Take	36	59	Bread	105	13
Person	27	59	(I) Found out	84	20	(I) Do	28	22	Whole wheat	105	14
Work (n.)	12	30	(I) did	33	16	Step	22	30	Coffee	84	12
Want	11	39	(I) felt	32	9	Insulin	20	22	Rice	75	11
Problem	11	28	Time	32	6	Mouth	19	6	Slice	46	7
Tell	10	41	Blood	32	6	Dinner	19	6	Crackers	46	7
(I) Know	9	45	Three years	32	5	Pill	19	8	Avoid	28	4
(I) Say	9	15	Father	20	7	Diet	18	18	Papaya	28	4
(I) Grab	8	11	Glucose	19	6	Two	17	10	Beans	28	3
(I) Become	7	53	Diabetes	16	48	Low	14	11	Small	28	3
(I) See	7	10	Cholesterol	15	4	Was/were	14	16	Juice	22	5
Leg	7	18	Mother	14	9	Eating	13	8	Snack	19	4
Rights	7	11	Know	14	15	Physical	11	8	Sweetener	19	5
Alive	6	56	(I) Lost	13	3	Urine	10	4	Pasta	19	3
Cause	6	12	Uncle	13	3	Rights	10	4	Taste	17	11
Lack	6	10	Routine	13	3	Arrive	6	11	Banana	14	3
Safe	6	9	Physician	11	27	Body	9	3	Fat	14	3
Life	6	18	Said	11	20				Fruit	11	5
									Meet	11	3
									Milk	11	3
									Sugar	7	7
Men, Maried, Use insulin			Age between 18 to 29 years old, Time of diagnosis from 1 to 10 years			Do not use insulin, Time of diagnosis from 1 to 10 years			Women, Time of diagnosis > 21 years		

Figure 01. Dendrogram with the Descent Hierarchic Classification (DHC) from the interviews (n=31)

With respect to class 1, it can be said that diabetes was anchored in the perception of responsibilities and the obligations toward the risk of developing the consequences of the disease. This categorization is related to medical knowledge, framing not only more serious instances of the disease, such as amputation, but also its initial state, since it is a silent disease, which is not diagnosed until the aggravation of the symptoms. Ministério da Saúde (2013) states that half of the population with diabetes is unaware of the symptoms. Stuhler (2012) says that diabetes may be related to incapacitating complications that compromise productivity, quality of life, causing serious psychosocial impacts in people's lives.

These participants further state that they hold the major responsibility in assuring the good development of the treatment, since they are the ones who receive the professional orientation. According to Ribas e tal (2013), some participants acknowledge medical orientation as a positive resource for facing the disease, and they take responsibility for what they chose not to follow from the recommendation that could improve their metabolic control. In this case, there is a resigned attitude from patients, due to the difficulty of breaking free from the inertial state and take up new habits for changing their life style.

These are the patients that demand special attention from health profession, who aim at instructing them to move toward a position of deeper engagement with healthy habits. Since there already exists a positive regard toward the consultation, it is necessary to work toward strengthening the patients' belief that they can overcome barriers hindering the access to desirable changes (Ribas et al, 2013).

Class 2, "Discovering the diagnosis", is formed of 39 UECs (14%) and of words and stems in the interval and meaningful frequency between χ2 = 84; f= 27 (*exam*) e χ2 = 11; f= 20 (*said*), identified in the narratives of participants between 18 and 29 years old, with a time of diagnosis varying between 1 to 10 years. This class refers to the patient's unawareness of the disease and to the process of finding out they have it, be it via routine exams or by using a glucometer (device that measures the amount of capillary glucose on the tip of the finger) in their homes. Another aspect to be highlighted is the development of the disease, due to a hereditary component, as it can be seen in the following report.

> *I used to hear a lot about diabetes, but I didn't know that I wasn't taking care of myself, too, my mother was [diabetic], but I wasn't interested in the problem … I found out I had diabetes in a routine exam … I found it out at a friend's house who also has diabetes, she said she wanted to check level, and I told her I was okay … my family's history was very painful, father, mother, uncles, aunts, grandparents, all of them died of cancer or diabetes*.

Participants anchor diabetes in factors related to the diagnosis. The most clarifying portions were: unawareness about diabetes; discovery of the disease via examination, or related to hereditary factors that came to be learned after the passing of a relative.

According to Rodrigues, Santos, Teixeira and Zanetti (2012), unawareness of diabetes is correlated to low education. The present study confirms such correlation, since out of the 31 people who were interviewed, 28 had completed only elementary school. The few years of study may influence the lack of adherence to the therapeutic plan given the difficulty to read and understand the prescriptions, increasing, therefore, health risks. Besides, the low level of education may limit the access to information, probably because there is trouble with patients' reading, speaking and writing skills, as well as problems for comprehending the more complex mechanisms of the disease and treatment (Rodrigues et al, 2012).

The patient's discovery of diabetes via periodic medical exams points to its natural process, in line with Barsaglini (2011). The identification could still happen by chance, surprising the patient due the lack of objective or subjective manifestations, even though validated initially through laboratorial confirmation (Barsaglini, 2011). In this study, the accidental discovery happened when patients used the glucometer at home.

Participants also reported the matter of heritage, even though there exists an increase in the number of cases due to current habits of population, such as sedentarism and inadequate diet (Whiting et al, 2011). It could be argued that the lack information about the main causes of the disease could improve the level of prevention, since diabetes is causes by both hereditary and environmental factors.

Emotional factor, too, is a salient component in this group. People who contributed the most in their reports described that being a diabetic is a synonym of sadness, sufferin, bad thoughts, depression, and death. Some claimed that diabetes is a disease that kills only a few. The following UECs exemplify this matter.

> *I became a sad person and I face severe depression after I found out I have diabetes … being a diabetic is really sad, I feel like crying, it is a disease that kills you little by little … a lot of bad stuff goes through my mind, to me it is death and suffering.*

The emotional character loaded in the disease is also evident in this class, by means of the following expressions: "sadness, cry, suffering, bad thoughts, depression, and death". In using these expressions participants materialized emotional reality after they received the diagnosis with diabetes.

According to Peres et al (2008), presenting a chronic condition involves a myriad change in habits and in everyday life, which could be framed as a heavy burden and difficult to accept. Receiving the diagnosis of a chronic disease such as diabetes awakens different feelings, emotional reactions and fantasies that need to the acknowledged and comprehended by health care professionals. The expressions used in patients' reports are in line with those found in Peres et al's (2008) study, which investigated social representations about diabetic women, who reported that the diagnosis was marked with sadness, anger, and chock.

Emotional instability that starts at the moment the patient receives the diagnosis could potentially interfere in the patient's metabolic control. Santos et al (2011) consider that these negative feelings, when entrenched, could predispose the patient to depressive sympotms, such as low self esteem hopelessness, low expectation about the future, loss of livelihood, and lack of interest for daily activities – including those considered important to the maintenance of good metabolic control.

Class 3, "Components for treatment", is composed of 50 UECs (17%) e of words and stems in the interval and significant frequency between $\chi2 = 36$; f= 59 (*take*) e $\chi2 = 9$; f= 3 (*cup*). The variables that most contributed to this class were participants who do not use insulin and have been diagnosed between 1 and 10 years. Participants in this class expressed favorable reactions towards the fulfillment of the treatment. When they expressed negligence, it was always followed by some sort of justification, as can be seen in the following narrative.

> *I keep up with the diet and walking, I eat every three hours, I am taking care of myself better, taking the prescription … I control my insulin, I apply it four times a day, two shots in the morning, before lunch and dinner, and the pill.*
>
> *I don't follow my diet, but I am taking my pills, before lunch and after dinner … the doctor told me I should walk, I did it for a while, but I've stopped, I already walk from the bus stop to my house … when I travel I don't take the meds … sometimes I follow the diet, I think every diabetic lacks discipline, I don't do any kind of physical activity, I start walking and I suddenly stop.*

Patients in this class anchored diabetes in biomedic knowledge about the treatment. This is seen in the use of the following expression: diet, medication, and physical activity. Consonant to Tavares et al (2011), patients with diabetes should conceal this triad, since this is the structure of the treatment.

With respect to physical activity, some participants informed they perform walking, be it as a formal and organized activity, offered at public or private institutions, or as an informal activity, for example, walking from the bus stop to their houses. According to Barsaglini (2011), even though it is not common for patients with diabetes to engage in organized forms physical activities, many of them affirm to practice physical activities of similar nature, such as cleaning the house, cooking, walking to work, walking with pets, taking care of relatives.

Even though patients were not unanimous with respect to following the diet or to regularly practicing physical activity, they were unanimous in taking the medication. In this state of affairs, medication seems to be the base of the treatment, given its legitimacy and its recognition for the results in controlling diabetes (Barsaglini, 2011). Since diabetes is a long-term disease, it requires a serious commitment to therapeutic procedures, and the ability to face it for the rest of their lives. It is not uncommon for the desire to follow through or to stop the treatment to be a constant in everyday life of diabetics (Peres et al, 2008).

Class 4, "Nutritional aspects", is formed of 28 UECs (10%). It presented words and stems in interval and significant frequency between $\chi2 = 105$; f= 13 (*bread*) e $\chi2 = 7$; f= 7 (*sugar*), most representative among women who have had the disease for more than 21 years. This group pointed to the description of food allowed in the diet, times and amounts; it also clarifies some homemade techniques used in order to decrease the levels of glucose in the body. The following report is an example.

> *My diet goes like this for breakfast I eat a banana, a slice of papaya, I don't drink coffee, I drink a lot of juice with sweetener, I like eating bread, but the doctor said I can't eat it, he told me to eat maybe a loaf or two during the week, but it has to be whole wheat … I eat everything whole wheat, crackers, rice, fat free meet, vegetables, I am used to eating up to four portions of fruit as the nutritionist recommends … everything has to be in small bites and small amounts … I drink ochre water for about six months now.*

Patients in class 4 anchored diabetes in its nutritional aspects expressed in the description of the food that compose the diet, times and amounts, and some homemade techniques for decreasing the level of glucose in the body. In this class it is possible to see propagation as a communication system determinant of content and form of the objectifications elucidated. In this case, the messages were produced and directed to the members of the group, showing that some members of the group chose to follow the diet, while other chose not to follow it (Saraiva & Coutinho, 2013; Moscovici, 2012).

The amount of food ingested was expressed with words such as: "small bite", "few". In this case, social representations about diabetes are related to the ingestion of little amounts of food. In their study, Ribas, Santos and Zanetti (2013) found that the concept of being well fed is related to the amount of food ingested, not the quality of it. In this sense, eating little food means being well fed.

This analytic category relates to the understanding that hunger is satiated and formulated in cultural, social, economic, and history terms. Ingesting food consists of a basic human need, but it is also configures as a social act. How much, what, when, how and where, as well as restriction are established by cultural conventions. Besides, practice, classification and representations of food could indicate the status of the individual within their community. In this sense, food could be interpreted as language, as a cultural text that translates worldviews, family and work views, body images, and social relations (Menasche, Marques, & Zanetti, 2008).

The study of food and eating practices through the perspective of social representations means to understand that people, in their cultural contexts, will chose the food they eat according to subjective values, in such a way they judge it to be the most correct and that translates the orientation they have receive from professionals (Ribas, 2009).

The types of food that must be avoided are described as being greasy or with sugar, suggesting that the ingestion of this type of food is not healthy. Coelho and Amaral (2008) recommend that people with diabetes mellitus should learn self-control in order to follow the instructions set out by professionals, and, therefore, following through with the diet. The practice of ingesting non-recommended food could have negative implication in the long-term future, such as gain of weight and, consequently, lack of control of the disease, even though there are short-term consequences, which can only reinforce the habit of eating unwarranted food.

Finally, participants also reported homemade techniques, such as drinking okra water, as an alternative measure to the conventional treatment against diabetes. According to Bersaglini (2011), it is common for people with diabetes to use alternative strategies in order to manage the main treatment, such as: homemade teas, natural medicine, and prayer. Evidently, the employment of these alternative therapeutic resources do not exclude the use of medication.

Final considerations

Aiming at apprehending the social representation elaborated by carries of diabetes mellitus about the disease, this study retrieved common sense knowledge, with evidence from different conception, feelings, attributes, and images permeating the construction of knowledge. It also led to a further comprehension of how people perceive this problematic and how they guide their action facing the disease. This means an overall contribution to a global understanding of diabetes mellitus.

This disease was represented as a silent, dangerous, multifaceted, whose diagnosis is only attained late, due the absence of specific symptoms and lack of knowledge about the disease. In similar fashion, the narratives showed the susceptibility of diabetics to physical and psychoemotional comorbidities, as it is the case with symptoms of depression, according to reports with negative humor: “sadness, cry, suffering, bad thoughts, and death”.

The treatment was verified in the triad: medication, diet, and physical activities, in spit the lack of rigorousness in engaging with physical activities. More broadly, the lack o commitment to therapy creates the feeling of self-culpability, especially when diabetics see themselves on the verge of great danger, as it happens in the case of loss of vision.

Based on these evidences, the social representations for the disease were organized according to biopsychemotional knowledge. The results point towards the importance of an interdisciplinary approach to the issue focusing on the psychosocial support tin order o elaborate strategies that could potentially be adopted to control diabetes, and provide more clarification about its causes and consequences, as well as incentives to the practice of physical activity.

These practices must consider the particularities of the social and cultural context in which people with diabetes live, by avoiding a merely submissive posture to what biomedical principals. It is important for this group to be led into reflections about the acceptance of the disease and their desires towards the treatment. Finally, there remains the suggestion for the development of studies concerning the resilience processes and subjective well-being, focusing how this groups overcome difficulties imposed by the context.

References

American Diabetes Association (ADA) (2015). *Diabetes mellitus.*Recuperado em 10 Agosto, de 2015, de http://www.diabetes.org/are-you-at-risk/prediabetes/?loc=superfooter.

Barsaglini, R. A. (2011). *Representações sociais e a experiência com o diabetes: um enfoque socioantropológico.* Rio de Janeiro: Editora Fiocruz.

Coelho, C. R., & Amaral, V. L. A. R. (2008). Análise de contingencias de um portador de diabetes mellitus tipo 2: estudo de caso. *Revista de Psicologia da Universidade São Francisco, 13*(2), 243-251.

Coelho, M. S., Silva, D. M. G. V., & Padilha, M. I. S. (2009). Representações sociais do pé diabético para pessoas com diabetes mellitus tipo 2. *Revista Escola de Enfermagem da USP, 43*(1), 65-71. Recuperado em 10 Agosto, de 2015, de http://www.scielo.br/pdf/reeusp/v43n1/08.pdf

Coutinho, M. P. L. & Saraiva, E. R. A. (2013). Teoria das representações sociais. In N. T. Alves et al. (Orgs.), *Psicologia: reflexões para ensino, pesquisa e extensão* (pp. 73- 114). João Pessoa, PB: Editora Universitária.

Coutinho, M. P. L. (2005). *Depressão infantil e representações sociais* (2ª ed). João Pessoa: Editora Universitária/ UFPB.

Internacional Diabetes Federation [IDF] (2013*).Diabetes mellitus.* Recuperado em 10 Agosto, de 2015, dehttp://www.idf.org

LeClair, C., Marquis, M., Villalon, L., & Strychar, I. (2009). Healthy adolescents' social representations of diabetes. *Canadian Journal of Diabetes, 33*(3), 170- 179.

Mantovani, A. M., Fegonesi, C. E. P. T., Pelai, E. B., Savian, N. U., &Pagotto, P. (2013). Estudo comparativo das representações sociais sobre diabetes mellitus e pé diabético. *Cadernos em Saúde Pública, 29*(12), 2427-2435.

Minayo, M. O. (2007). *O desafio do conhecimento: pesquisa qualitativa em saúde*. Rio de Janeiro: Abrasco.

Ministério da Saúde. Secretaria de Atenção à Saúde. Departamento de Atenção Básica. (2013). *Estratégias para o cuidado da pessoa com doença crônica: diabetes mellitus* Brasília: Ministério da Saúde.

Moscovici, S. (2012). *Representações sociais: Investigações em psicologia social* (7ª ed.). Petrópolis, RJ: Vozes.

Oliveira, J. E. P. & Vencio, S. (2014). *Diretrizes da Sociedade Brasileira de Diabetes: 2013-2014/ Sociedade Brasileira de Diabetes.* São Paulo: AC Farmacêutica.

Péres, D. S., Franco, L. J., Santos, M. A., & Zanetti, M. L. (2008). Representações sociais de mulheres diabéticas, de camadas populares, em Relação ao processo saúde-doença. *Revista Latino-americana de Enfermagem, 16*(3).

Ribas, C. R. P. (2009). *Representações sociais dos alimentos para pessoas com diabetes mellitus tipo 2.* Dissertação de Mestrado, Programa de Pós-Graduação em Enfermagem, Universidade de São Paulo, Ribeirão Preto.

Ribas, C. R., Santos, M. A., Zanetti, A. C. G., & Zanetti, M. L. (2013). Representações sociais de pacientes com diabetes mellitus sobre o atendimento por profissionais de saúde. *Revista Psico, 44*(1), 139-149.

Rigon, R., Rossi, A. G., & Cóser, P. L. (2007). Achados otoneurológicos em indivíduos portadores de Diabetes mellitus Tipo 1. Revista Brasileira de Otorrinolaringologia, 73(1), 106-111.

Rodrigues, F. F. L., Santos, M. A., Teixeira, C. R. S., Gonela, J. T., & Zanetti, M. L. (2012). Relação entre conhecimento, atitude, escolaridade e tempo de doença em indivíduos com diabetes mellitus. *Acta Paulista de Enfermagem,25*(2), 284-90.

Rodríguez, S. A., Meneses, L., Toboso R. P. Q., & Moreno, I. H. (2012). *Diabetes mellitus. Medicine, 11*(17), 995-1002.

Sá, C. P. (1998). A construção do objeto de pesquisa em representações sociais. Rio de Janeiro, RJ: UERJ.

Santos, M. A., Alves, R. C. P., Oliveira, V. A., Ribas, C. R. P., Teixeira, C. R. S., & Zanetti, M. L. (2011). Representações sociais de pessoas com diabetes acerca do apoio familiar percebido em relação ao tratamento. *Revista da Escola de Enfermagem da USP, 45*(3), 651-658.

Saraiva, E. R. A. (2010). *Violência contra idosos: aproximações e distanciamentos entre a fala do idoso e o discurso da mídia impressa.* Tese de doutorado, Programa de Pós-Graduação em Psicologia Social, Universidade Federal da Paraíba, João Pessoa.

Saraiva, E. R. A., Coutinho, M. P. L., & Miranda, R. S. (2011). O emprego do Software Alceste e o desenvolvimento do mundo lexical em pesquisa documental. In M. P. L. Coutinho & E. R. A. Saraiva (Orgs.), *Métodos de pesquisa em psicologia social: perspectivas qualitativas e quantitativas* (pp.67-94). João Pessoa, PB: Editora Universitária.

Stuhler, G. D. (2012). *Representações sociais e adesão ao tratamento do diabetes mellitus tipo 2.* Tese de Doutorado, Programa de Pós-Graduação em Psicologia Social, Universidade Federal de Santa Catarina, Florianópolis.

Tavares, B. C., Barreto, F. A., Lodetti, M. R., Guerreiro, D. M., Silva, V., & Lessmann, J. C. (2011). Resiliência de pessoas com diabetes mellitus. *Texto Contexto de Enfermagem, 20*(4), p. 751-757.

Torres-López, T. M., & Sandoval-Díaz, M. (2005). "Sangre y azúcar": representaciones sobre la diabetes de los enfermos crónicos en un barrio de Guadalajara, México. *Caderno de Saúde Pública, 21*(1), 101-110.

Vieira, K. F. L. (2012). *Sexualidade e qualidade de vida do idoso: desafios contemporâneos e repercussões psicossociais.* Tese de Doutorado, Programa de Pós-Graduação em Psicologia Social, Universidade Federal da Paraíba, João Pessoa.

Whiting, D. R., Guariguata, R., Weil, C., & Shaw, J. (2011). IDF Diabetes Atlas: Global estimates of the prevalence of diabetes for 2011 and 2030. *Diabetes Researchand Clinical Practice, (94)*3, 311–321.

Received: Nov. 11, 2015
Approved: May. 05, 2016

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