

Living under treatment for Systemic Hypertension and Diabetes Mellitus: Feelings and behaviors

Vidas em tratamento para Hipertensão Arterial Sistêmica e Diabetes Mellitus: sentimentos e comportamentos

Vidas en Tratamiento de la Hipertensión Arterial Sistémica y Diabetes Mellitus: sentimientos, comportamientos

Naiara Pinto Alves Pereira^I

ORCID: 0000-0002-6530-7324

Fernanda Moura Lanza^{II}

ORCID: 0000-0001-8250-180X

Selma Maria da Fonseca Viegas^{III}

ORCID: 0000-0002-0287-4997

^I *Prefeitura de Matozinhos. Matozinhos, Minas Gerais, Brazil.*

^{II} *Universidade Federal de São João Del-Rei.*

Divinópolis, Minas Gerais, Brazil.

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Corresponding Author:

Selma Maria da Fonseca Viegas
E-mail: selmaviegas@ufsj.edu.br



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ABSTRACT

Objective: To understand the feelings and behaviors of people being treated for Systemic Hypertension (SH) and Diabetes Mellitus (DM). **Method:** A qualitative study based on Grounded Theory and Symbolic Interactionism, with 27 participants in treatment for SH and DM followed up by the Family Health Strategy team. Open, axial and selective coding was performed, giving rise to three theoretical categories and the central category. **Results:** The daily life is explicit in the (lack of) care of the self with the chronic disease and feelings of sadness and anxiety are expressed as reasons for the lack of control of the disease. It points out that people take care of themselves because of fear of complications, reinforced the need for guidance on the use of medication and the empowerment of the chronic patient for self-care and care for the other. **Final considerations:** Knowing behaviors and feelings of people with SH and/or DM allows a professional performance beyond the chronic condition.

Descriptors: Chronic Disease; Medication Compliance; Feelings; Diabetes Mellitus; Hypertension.

RESUMO

Objetivo: Compreender os sentimentos e comportamentos de pessoas em tratamento para a Hipertensão Arterial Sistêmica (HAS) e Diabetes Mellitus (DM). **Método:** Estudo qualitativo embasado na Teoria Fundamentada nos Dados e no Interacionismo Simbólico, com 27 participantes em tratamento para HAS e DM acompanhados pela equipe Estratégia Saúde da Família. Procedeu-se a codificação aberta, axial e seletiva que originaram três categorias teóricas e a categoria central. **Resultados:** O cotidiano de vida está explícito no (des)cuidado de si com a doença crônica e sentimentos de tristeza e ansiedade são expressos como motivos condicionantes para o descontrolo da doença. Aponta que as pessoas se cuidam movidas pelo medo das complicações, reforçou a necessidade de orientação sobre o uso da medicação e do empoderamento do doente crônico para o autocuidado e cuidado do outro. **Considerações finais:** Conhecer comportamentos e sentimentos das pessoas com HAS e/ou DM permite uma atuação profissional além da condição crônica.

Descritores: Doença Crônica; Adesão à Medicação; Emoções; Diabetes Mellitus; Hipertensão.

RESUMEN

Objetivo: Comprender los sentimientos y comportamientos de personas en tratamiento de la hipertensión arterial sistémica (HAS) y la diabetes mellitus (DM). **Método:** Estudio cualitativo basado en la Teoría Fundamentada en los Datos y en el Interaccionismo Simbólico, con 27 participantes en tratamiento de la HAS y DM, y acompañados por el equipo Estrategia Salud de la Familia. Se procedió a la codificación abierta, axial y selectiva que originó las tres categorías teóricas y la categoría central. **Resultados:** El cotidiano de la vida está explícito en el (des) cuidado de sí con una enfermedad crónica. Los sentimientos de tristeza y ansiedad se expresan como motivos condicionantes para el descontrol de la enfermedad. Se señala que las personas se cuidan movidas por el miedo a las complicaciones. Se reforzó la necesidad de orientación sobre el uso de la medicación y del empoderamiento del paciente crónico para el autocuidado y cuidado del otro. **Consideraciones finales:** Conocer los comportamientos y sentimientos de las personas con HAS y/o DM permite una actuación profesional más allá de la condición crónica.

Descriptorios: Enfermedad Crónica; Adhesión a la Medicación; Emociones; Diabetes Mellitus; Hipertensión.

INTRODUCTION

Although there are many advances in public health, chronic diseases such as Systemic Hypertension (SH) and Diabetes Mellitus (DM) are among the most common, costly and preventable of all health problems. There is still much to be done in preventing and controlling morbidity and mortality from these diseases⁽¹⁻²⁾.

One of the essential functions that have been identified as critical to the practice of public health in the countries of the Americas is the guarantee of quality health services⁽³⁾. Within the basic elements to measure the quality of services is the use of the evaluation of health interventions with the highest level of scientific rigor. In relation to the quality of interventions in chronic diseases care, it can be associated with different factors and, in particular, the elements that form an essential part for comprehensive health care, which is to consider what people in chronic conditions feel, desire and suffer⁽⁴⁾.

Thus, social determinants may influence health outcomes related to the social gradient, and these may be classified as more proximal to the individual or more distally of the individual. Most of the distal social determinants are socioeconomic opportunities and resources that affect living and working environments. The more proximal determinants directly affect the health of an individual, which are behaviors and level of access to health care^(1,3). Although most of the variation in health is explained at the individual level, the social environment itself should be considered as a possible relevant influence on the health of the chronic patients⁽⁴⁾.

Chronic SH and DM diseases present high rates of morbidity and mortality, with economic, social and behavioral repercussions. In order to cope with and accept these diseases, in addition to the skills and knowledge to deal with the complex treatment, the individual must reevaluate his thoughts, feelings and behavior towards the disease⁽⁵⁾.

Because they are chronic diseases, they can arouse feelings of guilt, anxiety, fear and behavioral difficulties to understand the universe of the senses and emotions that arise with the impact of the diagnosis. It is imperative that the aroused feelings be overcome so that the chronic patient acquires confidence in the process of behavior change and learns to live with the disease without fear⁽⁶⁾.

Re-elaborating the feelings related to the process of sickness facilitates the occurrence of empowerment through behavior change, support for the acceptance of the disease, growth and personal fulfillment, preserving the autonomy of people with illness. Health education and empowerment are the main interventions of the multiprofessional team in the practice of promoting the health of people living with chronic conditions⁽⁷⁾.

In order for effective interventions and good health outcomes to occur, the professional must know what the individual has in relation to the chronic disease, monitor and follow the practice of self-care in the search for failures and potentialities and, based on this perception, provide knowledge updated information about the disease, effective communication, listening and understanding, as well as the capacity to negotiate and achieve goals⁽⁸⁾. Therefore, this study is justified by the relevance of the understanding of feelings and behaviors in relation to the experiences of people with SH and/or DM.

There are several factors that can contribute to the behavior of these individuals, highlighting those that characterize the disease, such as chronicity and complications; such as undesirable drug effects and complex therapeutic regimens; to the patient, such as age, sex, education, socioeconomic level, occupation, marital status, religion, life habits, cultural aspects and health beliefs, and behavioral changes are essential for the ideal follow-up of treatment⁽⁹⁾.

In this context it is questioned: What is it like to live under treatment for the chronic conditions of SH and DM? What are the feelings and behaviors of people being treated for SH and DM?

OBJECTIVE

This study aims to understand the feelings and behaviors of people being treated for Systemic Hypertension (SH) and Diabetes Mellitus (DM).

METHOD

Ethical aspects

This study was developed through the guidelines and regulatory standards defined in Resolution CNS (*Conselho Nacional de Saúde*) 466 of December 12, 2012. The data collection was done after approval by the Research Ethics Committee of the *Universidade Federal de São João Del-Rei*, Center-West Campus.

Theoretical-methodological framework

It is an exploratory, descriptive and qualitative study, according to Grounded Theory (GT)⁽¹⁰⁾ and Symbolic Interactionism⁽¹¹⁾.

The main intention of qualitative analysis is the understanding. For this purpose, the singularity of each participant was taken into account, because subjectivity is a manifestation of total living, in this context, with SH and/or DM diseases. The experience and the experience of an individual happen within the framework of collective history and are contextualized by the culture of the group in which it is inserted⁽¹²⁾.

The GT aims at understanding the reality from the perception or meaning that a certain scope or object has for the person, generating knowledge, increasing understanding and providing a meaningful guide to the action and the interaction of the participants in front of the researched object. The analysis procedures in the GT have the objective of identifying, developing and relating concepts. Thus, this methodological reference works with the concept of theoretical sampling⁽¹⁰⁾ that refers to the possibility of the researcher to search their data through the testimony of people who indicate that they have knowledge about the object and the reality researched.

This study was based on the Symbolic Interactionism theory that translates meaning as one of the most important elements in the understanding of human behavior, interactions and processes, to achieve a full understanding of the social process⁽¹¹⁾.

Symbolic Interactionism sees the use of meaning, not only as the reproduction or application of existing meanings, but believes that use is made from a process of interpretation. This process

consists of two stages: In the first, the individual specifies for himself which elements have meaning for him, and establishes a communication or interaction of the individual with himself. In the second, the individual transforms meanings according to the situation in which he finds himself and the direction of his actions. In this way, interpretation is a formative process, where meanings are used to guide and form actions⁽¹¹⁾.

Thus, Symbolic Interactionism is concerned with understanding human conduct based on its internal aspects, understanding how each one deals with the facts or the reality around them and how this will influence their reality, which in this study refer to the experience of people on SH and/or DM treatment.

Methodological procedures

The study was carried out in a large municipality of the Western Sanitary Macroregional of Minas Gerais State, Brazil. There are 47 public health care establishments in the municipality and 32 Family Health Strategy (FHS) teams are in place. Other private/philanthropic establishments participate in a complementary way to the Brazilian Unified Health System (SUS - *Sistema Único de Saúde*), among them 03 hospitals and 16 specialized services.

The source of evidence was the open, intensive, individual interview, with a semi-structured script that included the collection of the sociodemographic characteristics of the study participants and the guiding questions, contextualizing the object under study. In the GT, the open interview is used when in-depth information is sought through the exploration of narrated experiences in order to understand the object being studied. The questions initially provided opportunities to motivate and clarify the participant, allowed flexibility in questioning the respondent, determining the sequence and choosing the appropriate words⁽¹⁰⁾, which provided greater control over the situation and more evaluation of the validity of responses through observation of participant's non-verbal behavior.

Twenty-seven registered users of the Family Health Strategy (FHS) team that cohabited with SH and/or DM participated in the study. From these 27 participants, 24 are women, the average age is 64 years, the average income is 1 and half a minimum wage, and most of them are retired. As criteria for inclusion of the participant, we adopted: Person with SH and/or DM of Types I and II, over 18 years of age, registered and accompanied by the FHS team, research scenario; and exclusion: Persons unable, temporarily or permanently, to respond legally for their acts. Sampling was by theoretical saturation aimed "at the development, densification and saturation of the categories".

Collection, organization and analysis of data

The data were collected and analyzed concomitantly, thus describing the first reflections at the beginning of the collection phase. This process is called constant analysis. The GT method is circular and therefore allows the researcher some flexibility to look for other directions revealed by the data and to deepen in subsequent interviews the focus of the object being studied in the face of the reality lived by the participants until theoretical saturation occurs⁽¹⁰⁾.

The interviews were recorded, from February to July 2015, by means of an open interview, at a time of choice of the interviewees, recorded with the authorization of the participants, with an average duration of 20 minutes. Data collection was performed in the households of the study participants and met the methodological criteria of theoretical saturation: Occurred when no relevant or new data emerged; perceived by the data density for the development of the central category, and by the relationships between the subsidiary categories established and validated around the central category⁽¹⁰⁾.

The steps of the analysis considered the transcription of the interviews and the thorough reading of the text to identify the units of analysis and the establishment of the open coding, at this stage a table was elaborated with the 12 *in vivo* codes and the data. Then, these codes were separated by affinity and similarity, by the relation or complementation of ideas or expressions, configuring the axial codification and the conceptual definition of categories by means of the organization of their properties and dimensions, relating them. To understand the meaning of the data, the fragmented data were rearranged in the open coding to determine the causal conditions, context, strategies and consequences for the phenomenon under study. In the selective coding, a concept was assigned for each grouping of data performed, code by code, naming the three categories: "Living under Treatment for Systemic Hypertension and Diabetes Mellitus"; "Those who need care see themselves as caregivers"; "Needed to get sick to take care of themselves". Thus, the analytical description of the research participants' reports led to the central category "Behaviors and feelings in the treatment of Systemic Hypertension and Diabetes Mellitus", which is the conductive cement that places and holds together all the components of the theory⁽¹⁰⁾, that is, the central category makes explicit the experience experienced by the research participants in the treatment of SH and/or DM.

RESULTS

The analysis paradigm consisted of the categories: "Living under Treatment for Systemic Hypertension and Diabetes Mellitus"; "Those who need care see themselves as caregivers"; "Needed to get sick to take care of themselves". These categories were compared, related and interconnected according to the paradigmatic model⁽¹⁰⁾, defining the elements of the analysis by the determinant condition, context, strategy and consequence of living with SH and/or DM. The 12 *in vivo* codes mark participants' discourse and denote common incidents, difficulties, behaviors, feelings.

This living with SH and/or DM implies: Drug treatment versus non-drug treatment; food re-education; the work; the need for guidance/information on medication use; about the concern about the disease; the fear of disease; self-care and care of the other. The study participants stated that they had to get sick to take care of themselves. The experience of people with SH and/or DM determines the central category: "Behaviors and feelings in the treatment of Systemic Hypertension and Diabetes Mellitus", presented in the Figure 1.

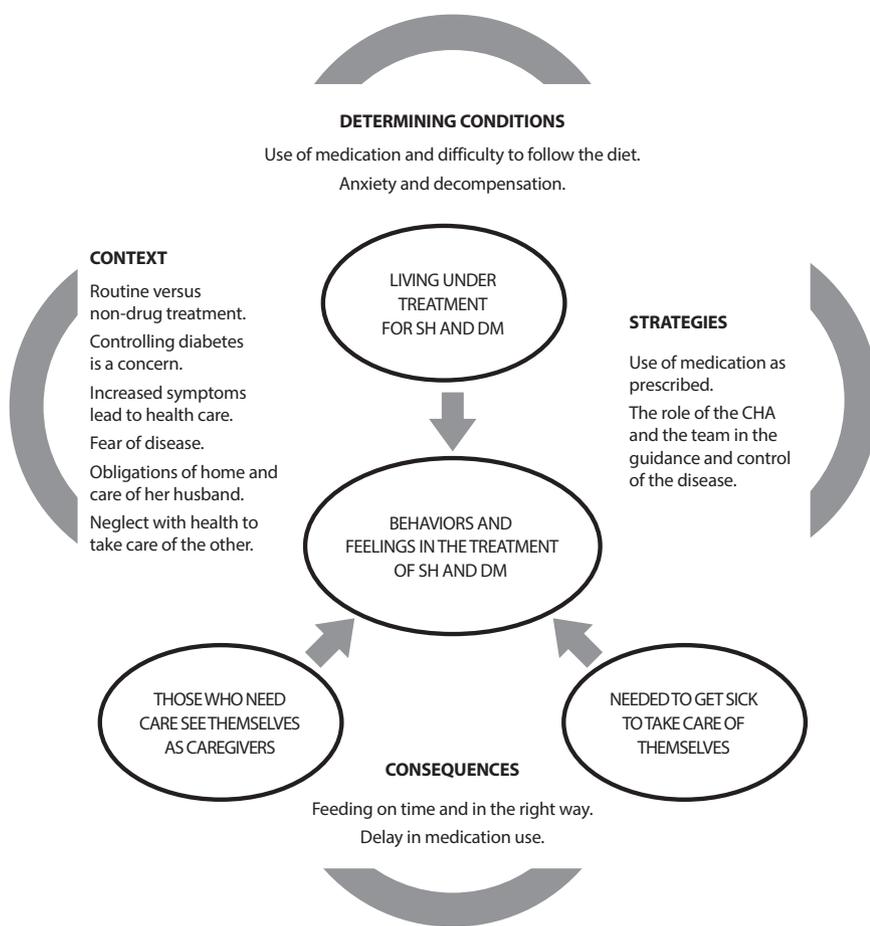


Figure 1 - Behaviors and feelings in the treatment of Systemic Hypertension and Diabetes Mellitus

The three categories bring the representativeness and the occurrence of the data in the theoretical sampling. Through the analysis paradigm, the experience experienced by the participants was made explicit, according to the statements below:

Living under Treatment for Systemic Hypertension and Diabetes Mellitus

Determining condition:

Yes, anxiety influences the disease because I get nervous and I end up feeling palpitation and sometimes when it happens I look and it is high. (E₂₁)

When I am anxious my glucose goes up or down a lot, in the pressure it also influences. I am very needy, and that influences yes. When I'm glad I look at the glucose level and it's fine, but when I'm anxious it changes. (E₂₃)

Context:

I am taking Losartana, one of 50 mg in the morning, by my own without going to doctor's appointment. I have already scheduled with the doctor to see if she can fix this. (E₈)

I do not take care of my health. Sometime I feel something and then I take dorflex or another medicine by my own, I can't stand looking for doctors. (E₂₇)

As I have Diabetes I have to go for a walk and I go either in the morning or in the afternoon. [...] I have already gone to the nutritionist so that she could provide me the correct diet. (E₁)

Medicines we receive are important, especially because they are all expensive, it is really tough! If I save 100 reais [Brazilian currency], would be helpful, even if I found the medicines for half of price. But if you have patience you will get appointments, examinations and the service is very good as well! Helping to take care, to guide. (E₉)

I take the remedy, and so far I was not on a diet, but sometime I am, for blood pressure I have to decrease the salt intake, but I do not always follow it. (E₂)

I take one medicine only, but when I feel the blood pressure is high I take more than one. (E₂₆)

Strategy:

The doctor asked to follow the way it is in the prescription, she puts in detail so I do not forget how to take the medicine, for example, take the medicine half an hour before eating, after lunch. The function of the Post is this: Follow up of the doctor and the instructions made by the doctor, the CHA and the nurse. (E₂)

I keep the medicine the way the doctor ordered it in a wooden box. The insulin I keep in a box of crockery inside the refrigerator, below [...] It helps me a lot, i this one [CHA] then ... my God! Every time I need him he comes to visit, because he's my agent! (E₂)

It's more the diet, the medication taken at the right time. I have to feed myself first so I can take the insulin later. (E₁)

I take good care of myself, I take the medicine right. It's just not to overeat, I have to eat every three hours, as I have been advised, there is a day that like this, there are days that I only have three meals a day. (E₁₀)

I'm going to buy that device to check the blood glucose level, because if I feel this discomfort I look and confirm if it's getting high, and then you have to tell the doctor. But when I feel it is higher I take another 150 mg pill. (E₁₄)

Consequence:

I avoid stress, when I get stressed, worried, anxious too much, it rises [blood pressure], if I get distressed, health is compromised, due to illness. (E₃)

My pressure is very emotional because of my service, it's just that I get anxious as it rises, I decrease the salt always when I see that it is altered. I increased the consumption of pepper, I drink a lot of water and I take the medicine every day. (E₁₁)

I do not eat much salt or fat, just lighter. In relation to stress, there is no way. I avoid, but it's complicated, there's time that goes up the pressure level. (E₂₁)

I'm very anxious and I think it harms me. Anxiety ... If you do not eat, pack everything in the cigarette! The pressure goes up when I'm angry. (E₂₂)

My life improved, I used to stay in bed, I have more energy today, I thought I was going to have something, I felt a lot of dizziness, but it improved a lot. The medicine, is not it? If I take the medicine and do not be on diet, I have to eat a little salt and avoid candies, even if it is difficult! I cook desserts to them, but I do not eat them, I exercise when I can and I feel more energetic. (E₁₂)

Needed to get sick to take care of themselves

Determining condition:

I discovered that I was diabetic when I went to the gynecologist and the test gave glucose in the urine [...] She went on a diet and I thought: I'll do it right because I'll heal. I was very fat, I did nothing, I began to diet after I discovered and I was able to lose fifteen kilos. Before I found out I did not take care of myself. (E₂₅)

I thought: I'm not afraid to die, I want to die, my life was so hard! I was going to sweep the house or rag on the furniture and I did not mind, I was too fat, weighing 94 kilos [...] Then I went to the doctor and she referred me to the nutritionist. First the doctor spoke to me 'you have to lose weight', but did I listen? I ate a lot, just eating, because of anxiety, I took fluoxetine for anxiety and I keep getting fat, getting fat ... (E₅)

I felt bad, I had nothing and I discovered that I am sick, I did not take any medicine, I was sad, I was afraid, I felt dependent on medicine, you know? I noticed the reason I had pain in the back of my neck. The doctor looked at my pressure and was high, we do not want neither for us nor for anyone. (E₂₁)

Context:

I'm very careless of me, I do not care, but now my health is impaired and I'm going to take better care of myself. (E₉)

I was calmer with the medication, I was very agitated and nervous, thinking that my life was not funny at all, I had everything and I had nothing, today I have the responsibility to take care of myself. (E₁₀)

Strategy:

Now I take good care of myself, before I left there, I just wanted to know how to work, but because of the problems I had, I follow correctly what the doctor told me. (E₁)

If I feel anything, I'm going to the post. CHA comes here and always gives information, mark examination, we gauge pressure and blood glucose level. (E₂)

I always ate a lot of fat, lots of roast meat, lots of frying, only after I got sick that I decided to eat less, you know? (E₂₆)

Now, another thing is food, I eat brown rice, like fruit, there is a day that I exceed myself and I eat a few sweets, but now everything is diet, I cannot cook sweets, otherwise I will eat everything! My daughter brings. (E₃)

Consequence:

I controlled diabetes that worries me a lot. There the staff gave me the little device and taught me how to use and control the blood glucose level. (E₁)

Blood pressure and glucose were under control, we got scared, we gotta take care of it! (E₂)

I'm afraid of losing my sight, I'm scared to death! My aunt became blind due to diabetes. (E₂₅)

Sometimes I forget to take the medication in the morning, but when I remember I take it at the same time. Now, metformin, I take only one, the doctor prescribed two, but it makes me dizzy and with diarrhea, when I take two I cannot even go to church. (E₁₂)

Recently my blood pressure is getting under control, so I'm not taking medicine at night. (E₁₃)

Sometimes, at eleven o'clock at night, I usually remember that I did not take the medicine and I have to take it at seven o'clock in the morning. There is a day that I forget and I take half a day, eleven o'clock [Take care of the granddaughters]. At night I always take nine hours, I do not forget because I'm afraid of dying. (E₄)

Those who need care see themselves as caregivers

Determining condition:

I have to prepare for him [husband] there I prepare for myself too. I remember because at eight in the evening I have to prepare his and then I already take before I forget. (E₃)

Context:

Uai... I get up at six thirty in the morning, I take care of him [husband], I bring the water for him to wash his face, I bring the coffee, medicine, insulin. Only after I'm going to take care of myself, will I gauge my glucose level, prepare my insulin, gauge the pressure, I have to gauge every day, write down and take it to the doctor, then I'll take my medications. (E₅)

Strategy:

I need to go to the post to consult with the doctor, to gauge the pressure that was not too high, but the diabetes was. It's difficult for me, you know. In the morning I stay with her [granddaughter] in the afternoon, I'll tell you the truth, I'm dismayed to go out! [...] I do almost nothing, I do not follow the diet, only the coffee with the sweetener, when I went to the group there at the post I started to use sweetener. There is a day that I eat a lot of rice, I have to stop with this rice, but not as salt, when I put a little more salt I get weird, I already know that it was the salt that makes me bad. (E₁₆)

Consequence:

Uai... I did not care about my health, everything was about him [husband], I did not want him to get sick, I did not want him to die, everything was about him, I did not care for myself, I was thinking about me... I kept it going... My diabetes level was high,

I gained a lot of weight! That's when I thought: I have to stop and take care of myself, because if I die who will take care of him, what should I do? (E₃)

The participants' experience symbolically denotes their feelings and behaviors in the treatment of SH and/or DM that permeate their attitudes and their actions in search of solutions.

DISCUSSION

In the first category, "Living under Treatment for Systemic Hypertension and Diabetes Mellitus", the participants reveal the feelings and behaviors of these conditions, the Symbolic Interaction of the influence of illness on their living and the relationships they establish to adapt to the treatment. They show the focus of primary and secondary prevention and denote the conditions for the lack of control of Blood Pressure (BP) and blood glucose.

The implementation of preventive measures in SH and MD presents a great challenge for professionals and health managers. Healthy habits of life should be adopted from childhood and adolescence, respecting the regional, cultural, social and economic characteristics of individuals⁽¹³⁻¹⁴⁾.

The main non-medicinal recommendations for primary prevention of SH are: Healthy eating, controlled consumption of sodium and alcohol, potassium intake, sedentary lifestyle and smoking.

As for DM type 1 (DM1), it does not have a rational basis that can be applied to the whole population, the most acceptable propositions are based on the stimulation of breastfeeding and on avoiding the administration of cow's milk in the first three months of life, these interventions have been based on immunomodulation or immunosuppression. Regarding DM type 2 (DM2), primary prevention is based on interventions in the diet and in the practice of physical activities, aiming to combat overweight in individuals at higher risk of developing diabetes, particularly those with impaired glucose tolerance⁽¹³⁻¹⁴⁾.

Feelings such as anxiety and worry are expressed as conditioning factors for BP and blood glucose control. Stress can be considered any force or experience that breaks the psychological balance will soon cause homeostatic imbalance in an organism, raising blood pressure levels. This elevation can lead to disease decompensation and increased risk of sequel and death⁽¹⁵⁾. Lifestyle modifications, including complementary therapies such as yoga practice, can reduce anxiety and improve blood pressure indices by reducing stress, increasing parasympathetic activation, and altering the sensitivity of baroreceptors. A systematic review of all published studies on yoga and SH (totaling 6,693 participants) reported that yoga effectively reduced BP in normotensive and hypertensive populations. These studies suggest that yoga is an adjunctive therapy effective for SH and worthy of inclusion in clinical guidelines⁽¹⁶⁾.

Regarding the behavior towards the disease, most of the participants of the research affirm that they self-medicate in search of control parameters and that they do not have the habit of searching the health unit through symptoms. The behavior of self-medicating must be identified by professionals as a challenge to be worked on. Most people lack adequate experience and knowledge to assess the severity of the disease, and an

inadequate therapeutic resource can generate adverse effects and mask signs and symptoms of disease progression^(3,7,9).

There were reports of participants' behaviors that favor their health and reduce the risk of damages caused by the decompensation of chronic disease. They refer to the proper use of the medication, to balanced diet, without added sugar and decreased fat and sodium, and to practice regular physical exercises. Pharmacological and non-pharmacological measures are indicated to avoid clinical manifestations of decompensation and other comorbidities⁽¹⁷⁾. However, adequate food was expressed by some participants within the viewpoint of deprivation, the 'regimen', prohibitions and restrictions imposed on conditions of illness, which expresses the condition of suffering from these restrictions.

SH and DM impact on increasing social and economic burden for society, as these conditions are affected by environmental factors, such as food. The *Política Nacional de Alimentação e Nutrição* (National Food and Nutrition Policy) and the Global Strategy share the same central purpose, which is to foster the associated responsibility between society, the productive sector and the public to make the necessary changes in the socio-environmental scope, which favor healthy choices at the individual and collective levels, stimulation of breastfeeding, encouragement of healthy eating, physical activity and the fight against sedentary lifestyle, smoking and alcohol consumption⁽¹⁸⁾.

After investigating the sociodemographic and clinical determinants of 327 individuals with uncontrolled DM2 attending Primary Health Care in the OR Tambo district of South Africa, one study identified a high prevalence (83.8%) of uncontrolled DM2 among patients, possibly attributable to overweight/obesity, sedentary life, lower income and lack of information about diabetes. The approach to these determinants will require re-engineering of Primary Health Care in the district⁽¹⁹⁾.

Some participants emphasize that they only achieve an effective treatment of SH and DM, since they are supported by the guidance and follow-up of the multidisciplinary team, by health education actions, associated to the periodic control of BP and/or blood glucose levels, to physical exercises and food re-education. Lifestyle management is a key aspect of DM treatment and includes education and support for self-management, nutritional therapy, physical activity, cessation guidance, and psychosocial care. Persons in this condition and caregivers should focus on how to optimize lifestyle from the time of diagnosis, on all subsequent assessments and follow-up, and during the assessment of complications and management of comorbidities to improve DM treatment. Education focuses on supporting the empowerment of people with DM by providing the tools to make informed self-management decisions⁽²⁰⁾.

Satisfactory conduction of treatment is only established with an active posture of the person. This link aims to change behavior and positive reinforcement of correct attitudes towards health care. Knowledge of diseases is associated with improved quality of life, and provides greater acceptance of the disease⁽²¹⁾. The home visit of the CHA was mentioned, since professional contributes to the access to the care and facilitates the appropriate use of available health resources⁽²²⁾.

The second category, "Needed to get sick to take care of themselves" identifies that some of the research participants

only began to take care of their health from the discovery of the disease and fear of the consequences of not being treated.

Most interviewees said they did not take care of themselves before the illness was discovered. One study pointed out that people who were unaware of the SH diagnosis neglected health care before being aware of the disease and adopted self-care measures after guidance⁽²³⁾.

The feeling of fear and sadness led participants to avoid harm and complications. A study has found that people with diabetes are subject to their own fears and helplessness. Achieving good disease control depends not only on the patient or on health care provided, but the support of the family is also indispensable to include in the scope of strategies and interventions the control and prevention of complications⁽²⁴⁾. Another study carried out with people with SH conditions shows that the social support of the family was positively associated with adherence to the medication and regular assessment for the treatment of the disease⁽²⁵⁾.

A study on the association between anxiety sensitivity and adherence to medication for SH treatment found that high anxiety sensitivity was strongly associated with withdrawal of SH medication even after adjusting for known confounding factors. The results suggest the education of patients who have uncontrolled SH and use of their adaptive strategies to manage sensitivity to anxiety, which may help to improve adherence to medication and therefore lower cardiovascular risk⁽²⁶⁾.

Treatment and adaptation to chronic diseases is a slow process because it is necessary to establish a dialogue between the knowledge of the people in these conditions with the possibilities of promoting health care, dealing with the disease and preventing damages. Educational campaigns and actions, lifestyle changes, acceptance and implementation of pharmacological and non-pharmacological measures are necessary⁽²⁷⁾.

Based on the health education, the request for examinations and the assistance actions by the multidisciplinary team, a study describes that from the demands of the people with SH and DM they demonstrate a change of behavior through the trust placed in the guidance of the professionals and in following established conduct. Knowledge about chronic disease can influence the behavior of the individual and provide effective changes, enabling the sick person to develop, through their own means, mechanisms to identify and prevent complications⁽²³⁾.

The category "Those who need care see themselves caregivers" shows that some participants of the research even living with the chronic disease are responsible for the care of the other family member. It shows in the background the care of the patient as a chronic patient, or this care is sometimes inefficient because of the overload experienced as caregiver of the other.

Participants who have bedridden or caring partners declare that before caring for themselves, they take care of them. There is a delay in the use of medication by forgetfulness, since all time is consumed in the care of the other. In the case of grandmothers, there may be a decrease in the quality of their physical and emotional health, with an increase in cases of depression and a low capacity to perceive the lack of control of the disease as a risk. There may be conflicts in family life, distancing oneself from social life, possibly leading to tiredness, emotional and physical exhaustion⁽²⁸⁾.

The process of living with and caring for a family member with chronic illness who has a degree of disability is also an arduous task. It can lead to an overload that is potentially a stressor, anxiety, fear and suffering, evolving, for the most part, to a process of hemodynamic balance disruption, physical, psychological or emotional problems and carelessness disease⁽²⁹⁾.

A study conducted in Chinese community with 318 people with SH showed that approximately 22.3% and 15.4% of participants reported symptoms of anxiety and depression respectively⁽²⁵⁾.

A study of 178 patients, 20-70 years old, who started antihypertensive treatment, without other chronic conditions, and did not take mood modifying drugs, found that the risk of nonadherence was 52.6% in 12 months. After adjusting for other risk factors, individuals with at least mild depression and those with at least mild anxiety were 2.48 and 1.59 times more likely to become nonadherent within the next 3 months respectively. Screening for symptoms of depression and anxiety can be used to identify high-risk patients⁽³⁰⁾.

For the active involvement of the person with SH in adherence to treatment, BP follow-up, and improved self-management behavior and clinical outcomes, the use of mobile phone technology and monitoring tools provides individuals with motivation to improve their management of health, with an added benefit above and beyond motivation alone⁽³¹⁾.

Human beings should be seen to act on things based on the meanings they attribute to these things, which are derived from, or are prior to, the social interaction that some have with others and with society. These meanings are controlled in, and modified by, an interpretive process used by people interacting with each other and with the things they encounter⁽²¹⁾.

The symbolic world is only constructed through the interaction between two or more persons and, therefore, symbolism is not a result of the subject's interaction with him or even of his interaction with the chronic disease, object of this study. Although this study has presented an individual sense of the participants and the meaning of the experience with chronic illness, it is considered a basis for each and every one of the senses that each gives to their own actions, since it is based on the interactions of the individual, or in what the "I" does, being regulated by what "we" construct socially. Thus, the participants in the research demonstrate in their testimonies how they should be treated, explain the professional conduct, what they understand by the disease and what is socially lived, since the drug treatment and non-drug is already part of their knowledge and is disclosed by various means in society.

Study limitations

The limitation of this study lies in the restriction of the scenario, a large municipality. Although the study discussed the individual meanings of living with SH and DM the results evidence basic meanings that may share the experience of others regarding treatment for these chronic conditions.

Contributions to the sectors of Nursing and Health

This study has important subsidies so that Health and Nursing professionals can have a look at the very singular meanings of

individuals living under SH and/or DM treatment, configured in the interpretation of the feelings and behaviors of each of the participants, in a sociological view of lives in illness as well for effective and efficient interventions to make treatment of the chronic condition less tiring and obtain better health outcomes.

FINAL CONSIDERATIONS

This study revealed the behaviors and feelings of the participants of the research, revealing their daily attitudes towards care with the disease, their feelings, such as sadness, anxiety, fear and that these feelings interfere in the control of acceptable parameters in the context of these diseases.

Participants know that the treatment should be medicated and non-medicated, that the multiprofessional team should be prepared to deal with these people, guiding them. Treatment of SH and DM will only be effective if the person understands the history of the disease and the importance of following the guidelines for self-care.

The treatment of the person with DM and/or SH and the adoption of attitudes towards a better quality of life is still a great challenge. It depends on the early diagnosis, on established behaviors in relation to the people affected and that endow of autonomy and freedom of choices to live the chronic condition.

Support strategies for these people in chronic illness should be encouraged. The interventions must have the objective of the shared construction of knowledge that will help these people in the reorganization of the emotional structure, adaptation and treatment before the chronic condition. Supporting the person in chronic condition facilitates the maintenance of well-being and physical and mental balance through autonomy and knowledge.

These considerations advocate public health with assurance of quality health services and effective interventions to impact on SH and DM morbidity and mortality, as well as an expansive political approach that considers how social determinants directly affect an individual's health, especially in the behaviors and level of access to health care and that can be modified to improve the health of the populations.

REFERENCES

1. Shaw KM, Theis KA, Self-Brown S, Roblin DW, Barker L. Chronic Disease Disparities by County Economic Status and Metropolitan Classification, Behavioral Risk Factor Surveillance System, 2013. *Prev Chronic Dis* [Internet]. 2016 [cited 2016 Aug 29];13:160088. Available from: <http://dx.doi.org/10.5888/pcd13.160088>
2. Centers for Disease Control and Prevention (CDC). Chronic Disease Prevention and Health Promotion [Internet]. Atlanta (GA): CDC-INFO; 2018 [cited 2016 Jul 20]. Available from: <http://www.cdc.gov/chronicdisease/overview/index.htm>
3. Avalos García MI, López Ramón C, Morales García MH, Álvarez HRP, Pérez SMGG, Foster NRC. Calidad en el control de la diabetes mellitus en unidades de atención primaria de México. Un estudio desde la perspectiva de la familia de los pacientes. *Aten Primaria* [Internet]. 2017 [cited 2016 Aug 29];49(1):21-7. Available from: <https://doi.org/10.1016/j.aprim.2016.02.012>
4. López-Ramón C, Ávalos-García MI. Diabetes mellitus hacia una perspectiva social. *Rev Cubana Salud Pub* [Internet]. 2013 [cited 2016 Aug 29];39(2):331-45. Available from: http://bvs.sld.cu/revistas/spu/vol39_2_13/spu13213.htm
5. Almeida AM, Nunes FA, Rezek GSS, Novo NF, Schnaider TB. Qualidade de vida, autoestima, depressão e espiritualidade em pais cuidadores de menores diabéticos. *Rev Med Res* [Internet]. 2012 [cited 2016 Apr 02];14(2):94-100. Available from: <http://www.crmpr.org.br/publicacoes/cientificas/index.php/revista-do-medico-residente/article/viewFile/248/238>
6. Martins EMCS, Ataíde MBC, Silva DMA, Frota MA. Vivência de mães no cuidado à criança diabética tipo 1. *Rev Rene* [Internet]. 2013 [cited 2016 Apr 02]; 14(1):42-9. Available from: <http://www.periodicos.ufc.br/rene/article/view/3323/2561>
7. Guedes NG, Moreira RP, Cavalcante TF, Araujo TL, Lopes MVO, Ximenes LB, NFC Vieira. Nursing interventions related to health promotion in hypertensive patients. *Acta Paul Enferm* [Internet]. 2012 [cited 2016 Mar 12];25(1):151-56. Available from: http://www.scielo.br/pdf/ape/v25n1/en_v25n1a26.pdf
8. Carvalho TH, Afonso RI, RC, Faria P. [Telephone-based monitoring: an educational strategy for diabetes self-care at the primary health care level]. *Ciênc Enferm* [Internet]. 2013 [cited 2016 Jan 28];19(1):95-105. Available from: <http://dx.doi.org/10.4067/S0717-95532013000100009> Portuguese.
9. Cavalari E, Nogueira MS, Fava SMCL, Cesarino CB, Martin JFV. Adesão ao tratamento: estudo entre portadores de hipertensão arterial em seguimento ambulatorial. *Rev Enferm UERJ* [Internet]. 2012; [cited 2015 Sep 21];20(1):67-72. Available from: <http://www.e-publicacoes.uerj.br/index.php/enfermaguerj/article/view/3979>
10. Corbin J, Strauss. *Basics of Qualitative Research: Techniques and Procedures for Developing Grounded Theory*. 3rd ed. Thousand Oaks, CA: Sage. 2008. 456 p.
11. Blumer, Herbert. *Symbolic Interactionism: perspective and method*. Englewood Cliffs (NJ): Prentice-Hall, 1969. 208 p.
12. Minayo MCS. Qualitative analysis: theory, steps and reliability. *Rev Ciên Saúd Coletiva* [Internet]. 2012 [cited 2015 Dec 12];17(3):621-26. Available from: http://www.scielo.br/pdf/csc/v17n3/en_v17n3a07.pdf
13. Sociedade Brasileira de Cardiologia; Sociedade Brasileira de Hipertensão; Sociedade Brasileira de Nefrologia. VI Diretrizes Brasileiras de Hipertensão. *Arq Bras Cardiol* 2010 [cited 2018 Oct 28];95(1 supl.1): 1-51. Available from: <http://dx.doi.org/10.1590/S0066-782X2010001700001>

14. Standards of medical care in diabetes--2015: summary of revisions. *Diabetes Care*. 2015;38 Suppl:S4. doi: 10.2337/dc15-S003.
15. Lopes NP, Salzbrun CA, Barroso MC, Ribeiro SJP, Webber JS, Rosa PCL, Borges BE, Heimbecher C. Perfil de fatores determinantes da HAS de uma população específica em uma região delimitada de Curitiba-PR. *Rev Curso Enferm Curitiba*, 2015;1(1):1-11.
16. Tyagi A, Cohen M. Yoga and hypertension: a systematic review. *Altern Ther Health Med [Internet]*. 2014 [cited 2016 Mar 12];20(2):32-59. Available from: <https://www.ncbi.nlm.nih.gov/pubmed/24657958>
17. Gomes MA, Cruz FAO, Fragoso VMS, Pinto GC. Análise da automedicação em pacientes com diabetes. *Vivências [Internet]*. 2013 [cited 2016 Mar 12];9(16):193-200. Available from: http://www.reitoria.uri.br/~vivencias/Numero_016/artigos/pdf/Artigo_20.pdf
18. Martinez S. A nutrição e a alimentação como pilares dos programas de promoção da saúde e qualidade de vida nas organizações. *Mundo Saúde [Internet]*. 2013 [cited 2015 Sep 21];37(2):201-7. Available from: http://bvsmis.saude.gov.br/bvs/artigos/mundo_saude/nutricao_alimentacao_pilares_programas_promocao.pdf
19. Adeniyi OV, Yogeswaran P, Longo-Mbenza B, Ter Goon D, Ajayi AI. Cross-sectional study of patients with type 2 diabetes in OR Tambo district, South Africa. *BMJ Open*. 2016;296(7):e010875. doi: 10.1136/bmjopen-2015-010875
20. American Diabetes Association. Lifestyle Management: Standards of Medical Care in Diabetes 2018. *Diabetes Care*. 2018;41(Suppl.1): S38-S50. doi: 10.2337/dc18-S004
21. Santos L, Torres HC. Educational practices in diabetes mellitus understanding the skills of health professionals. *Text Context Nursing [Internet]*. 2012 Jul-Sep [cited 2015 Sep 21]; 21(3): 574-80. Available from: http://www.scielo.br/pdf/tce/v21n3/en_v21n3a12.pdf
22. Costa SM, Araújo FF, Martins LV, Nobre LLR, Araújo FM, Rodrigues CAQ. [Community health worker: a core element of health actions]. *Ciênc Saúde Coletiva [Internet]*. 2013 [cited 2015 Sep 25]; 18(7):2147-56. Available from: doi: <http://dx.doi.org/10.1590/S1413-81232013000700030> Portuguese.
23. Souza NPG, Oliveira GYM, Girão ALA, Souza LM, Maniva SJCF, Freitas CHA. [Conceptions of illness from hypertension and Diabetes Mellitus among a group of hospital inpatient]. *Rev Enferm UERJ [Internet]*. 2015 [cited 2016 Mar 12];23(1):52-7. Available from: <http://dx.doi.org/10.12957/reuerj.2015.15579> Portuguese.
24. López-Ramón C, Ávalos-García MI, Morales-García MH, Priego-Álvarez HR. Perspectivas del paciente en el control de la diabetes mellitus en unidades médicas de la seguridad social de Tabasco: un estudio cualitativo. *Salud Tabasco [Internet]*. 2013 [cited 2016 Mar 12];19(3):77-84. Available from: <http://www.redalyc.org/articulo.oa?id=48730715002>
25. Hu HH, Li G, Aro T. The association of family social support, depression, anxiety and self-efficacy with specific hypertension self-care behaviours in Chinese local community. *J Hum Hypertens*. 2015;29(3):198-203. doi: 10.1038/jhh.2014.58
26. Alcántara C, Edmondson D, Moise N, Oyola D, Hiti D, Kronish IM. Anxiety sensitivity and medication nonadherence in patients with uncontrolled hypertension. *J Psychosom Res*. 2014;77(4):283-6. doi: 10.1016/j.jpsychores.2014.07.009
27. Alves BA, Calixto AATF. Aspectos determinantes da adesão ao tratamento de hipertensão e diabetes em uma unidade básica de saúde do interior paulista. *J Health Sci Inst [Internet]*. 2012 [cited 2016 Mar 12]; 30(3):255-60. Available from: http://www.unip.br/comunicacao/publicacoes/ics/edicoes/2012/03_jul-set/V30_n3_2012_p255a260.pdf
28. Mainetti AC, Wanderbroocke ACNS. Avós que assumem a criação de netos. *Pensando Fam [Internet]*. 2013 [cited 2016 Mar 21]; 17(1):87-98. Available from: http://pepsic.bvsalud.org/scielo.php?script=sci_arttext&pid=S1679-494X2013000100009
29. Manuel MF, Teston EF, Waidman MAP, Decesaro MN, Marcon SS. As relações familiares e o nível de sobrecarga do cuidador familiar. *Esc Anna Nery [Internet]*. 2013 [cited 2016 Mar 21];17(2):346-53. Available from: <http://dx.doi.org/10.1590/S1414-81452013000200020>
30. Bautista LE, Vera-Cala LM, Colombo C, Smith P. Symptoms of depression and anxiety and adherence to antihypertensive medication. *Am J Hypertens*. 2012;25(4):505-11. doi: 10.1038/ajh.2011.256
31. Kim JY, Wineinger NE, Steinhubl SR. The Influence of Wireless Self-Monitoring Program on the relationship between patient activation and health behaviors, medication adherence, and blood pressure levels in hypertensive patients: a substudy of a randomized controlled trial. *J Med Internet Res*. 2016;18(6):e116. doi: 10.2196/jmir.5429