Original Article

INSUFICIÊNCIA CARDÍACA E CRENÇAS DIFICULTADORAS NA ADESÃO AO TRATAMENTO

HEART FAILURE AND DIFFICULTIES IN TREATMENT ADHERENCE

INSUFICIENCIA CARDÍACA Y DIFICULTAD EN LA ADHESIÓN AL TRATAMIENTO

Rosamary Aparecida Garcia Stuchi[1,] Thabata Coaglio Lucas[2], Cristina Arreguy-Sena[3], Claudia Aparecida Fernandes Cordeiro[4]

RESUMO

Objetivo: identificar quais os tipos de crenças, segundo o referencial de Rokeach, relacionadas à Insuficiência Cardíaca e os dificultadores da adesão ao tratamento. **Método:** estudo qualitativo em que entrevistas semiestruturadas foram aplicadas aos participantes. Para análise das crenças, utilizou-se o referencial de Rokeach 1981. **Resultados:** foram entrevistados 26 pacientes da Estratégia de Saúde da Família e, dos entrevistados, 88% tinham Hipertensão Arterial Sistólica, 35% colesterol elevado e 35% Infarto Agudo do Miocárdio prévio. As crenças dos tipos B e A foram as mais predominantes (88%) relacionadas à doença, as quais consistiam em crenças primitivas e de difícil modificação. **Conclusão:** as crenças dos tipos A e B dificultavam a adesão ao tratamento. Os fatores dificultadores identificados, como falta de acesso ao serviço, interação médico-paciente e mudanças de hábitos alimentares e estilo de vida, deveriam ser temas de intervenções efetivas de educação e treinamento dos profissionais de saúde.

Descritores: Insuficiência cardíaca; Adesão à medicação; Aceitação pelo paciente de cuidados de saúde.

ABSTRACT

Objective: To identify the types of beliefs, according to Rokeach's reference, related to Heart Failure and the difficulties in treatment adherence. **Method:** This is a qualitative study, which applied semi-structured interviews with the participants. To analyze beliefs, we used the Rokeach 1981 reference. **Results:** We interviewed twenty-six patients from the Family Health Strategy and 88% had systolic arterial hypertension, 35% high cholesterol and 35% previous acute myocardial infarction. Types B and A were the most prevalent (88%) beliefs related to the disease, which consisted in primitive beliefs that are difficult to modify. **Conclusion:** the beliefs of types A and B made treatment adherence difficult. The identified difficulties, such as lack of access to the service, physician-patient interaction and changes in eating habits and lifestyle should be themes of effective education interventions, and part of health professionals training.

Key words: Heart failure; Medication adherence; Patient acceptance of health care.

RESUMEN

Objetivo: identificar los tipos de creencias, de acuerdo con la referencia de Rokeach, relacionadas con la insuficiencia cardíaca y factores que dificultan la adhesión al tratamiento. **Método:** Este es un estudio cualitativo con entrevistas semiestructuradas aplicadas a los participantes. Para el análisis de las creencias se utilizó la referencia Rokeach 1981. **Resultados:** veintiséis pacientes de la Estrategia de Salud de la Familia fueron entrevistados, de los cuales, el 88% tenía hipertensión arterial sistólica, el 35% colesterol alto y el 35% infarto agudo de miocardio previo. Las creencias de los tipos B y A fueron las más predominantes (88%) relacionadas con la enfermedad, que consistían en creencias primitivas y de difícil modificación. **Conclusión**: las creencias de los tipos A y B dificultan la adhesión al tratamiento. Las dificultades identificadas, como la falta de acceso al servicio, la interacción médico-paciente y los cambios en los hábitos alimenticios y el estilo de vida, deberían ser temas de intervenciones efectivas de educación y capacitación de los profesionales de salud.

Descriptores: Insuficiencia cardíaca; Adhesión a la medicación; Aceptación de la atención de salud**.**

[1]Graduada em Enfermagem e Letras. Doutora em Enfermagem pela Universidade de São Paulo/Ribeirão Preto. Docente na Universidade Federal do Vale do Jequitinhonha e Mucuri. [2]Graduada em Enfermagem. Doutora em Engenharia Mecânica/Bioengenharia pela Universidade Federal de Minas Gerais. Docente na Universidade Federal do Vale do Jequitinhonha e Mucuri. [3]Graduada em Enfermagem. Pós-Doutora pela Universidade Nova de Lisboa. Docente na Universidade Federal de Juiz de Fora. [4]Graduada em Enfermagem. Mestranda em Ciências Farmacêuticas pela Universidade Federal do Vale do Jequitinhonha e Mucuri.

INTRODUCTION

Heart failure (HF) is a serious public health problem, with prevalence in more than 23 million people worldwide, and the incidence has been growing with the ageing population[1]. In the United States of America (USA), about 5.7 million adults have HF and half of the population develops it within 5 years[1]. In the U.S. and Europe, 30-50% of patients diagnosed with HF require re-hospitalization every 60 to 90 days[1-2].

Patients with HF that need to be in hospital for compensation are the group of greater severity because, while technological advances in treatment have shown an improvement of the prognosis, the great number of hospitalizations is a strong predictor of increased mortality for this group[3-4], therefore a challenge in the treatment of this disease.

Once installed, the HF causes a great impact in the life of the patient, with limitations resulting from physical and psychological symptoms associated with the syndrome[2-4]. Physical symptoms include fatigue and dyspnea that frequently present progressive aggravation[5]. On the other hand, between the emotional symptoms are fear, insecurity and sadness[5]. These repercussions influence quality of life related to the health of the subject that experience them[5].

A European study indicated that the longer the period of treatment of the disease the less the adherence to therapies for prevention and care. Educational programs of intervention with the patient's feedback, in relation to the knowledge of the disease and the beliefs that can hamper this learning, provide a better adherence to the treatment[3].

Adherence is understood as the degree of conformity between the recommendations of health professionals and the behavior of the person in relation to the treatment regimen proposed, that is, whether they take the medication, follow diets or change lifestyle that match the therapeutic regime prescribed[6]. Other studies indicate that socio economic history, psychological aspects and educational level are factors that influence the adherence patterns for the population with HF[2-3,6-7].

In Brazil, the main etiology of HF is the chronic ischemic heart disease associated to hypertension[8]. In certain geographic regions of the country and in areas of low socio-economic conditions, there are still forms of HF related to Chagas disease, endomyocardiofibrosis and chronic rheumatic valvular heart disease, that are special cases of HF in our context[4].

In the period from January to August, 2014, the number of hospitalizations in Brazil as a result of the HF was 152,187 and deaths reached 14,936[4,8].

In Minas Gerais, the hospitalizations reached the number of 23,087 corresponding to nearly 3% of all admissions made in the State, in the same period, reaching 1,955 deaths. In the region of Jequitinhonha, the number of hospitalizations was 1,025, registering a total of 56 deaths, which corresponds to approximately 0.37% of all deaths registered in this macro-region[4,8].

Many risk factors are associated with the development of this pathology such as Systolic Hypertension (SH), Coronary Insufficiency, Diabetes Mellitus (DM), Obesity, Cardiac Valve Disease, Metabolic Syndrome, Chagas disease, use of cardiotoxic drugs and family history of cardiomyopathy[6]. The HF is one of the most limiting diseases, even more than Diabetes Mellitus and chronic obstructive pulmonary disease[7-9].

These comorbidities may affect adherence to pharmaceutic treatment of HF[9]. The main drugs used to treat HF are the angiotensin-converting enzyme inhibitors II (ACE INHIBITORS) that act by decreasing the formation of angiotensin II and accumulating bradykinin, and are generally the drugs of first choice, considering the various etiologies of HF[10].

Beta Blockers (BB) have action on the antagonism of sympathetic activity, which leads to clinical improvement and the ventricular function. The angiotensin II receptor blockers (ARBS) hinder receptors and thus promote reduced levels of aldosterone and catecholamines, causing arterial vasodilation with consequent decrease in peripheral vascular resistance[7-9]. The aldosterone antagonists, inhibiting that substance, avoid their damage such as myocardial fibrosis, rigidity and cardiac dysfunction[9.10].

In addition, the treatment of HF is generally centered on drug therapy and living habits change, including physical activity and dietary modification. Changing eating habits such as reducing sodium in diet, avoiding hyper caloric diets and the use of alcoholic beverages, however, involve cultural and economic changes

in the way of living and in the design of the individual's health.

The health conception is formed through the personal experience and presents a close relationship with their beliefs, values, feelings, among others[10-11].

Beliefs are specifically defined as ideas, concepts, convictions and attitudes taken by users, are related to health and/or disease and how these factors influence the quality of life of these people[11]. Studies demonstrated that the beliefs are considered an important factor for the wrong behavior related to the treatment regimen prescribed, although many of the health professionals neglect such beliefs when treating the patient[3,12-13].

The human being has several types of beliefs, which are inferences made by people about some things, about me, about the others, about the world. Of the five types of beliefs described in the Rokeach references (1981), widely used in the area of communication, marketing and advertising, the more central is the primitive of 100% consensus (type A); it is supported by a unanimous social consensus, that is, what everyone believes and is not subject to controversy, being more resistant to change[14].

A second type of primitive belief is zero consensus (type B), also resistant to change, but does not depend on a social consensus; it is originated from personal experiences, self-identity, self-esteem and self-concepts[14].

It should be noted that the beliefs are not equally important to individuals and "the more central is a belief that changed the greater the impact on the rest of their belief system"[12-13].

There are also the beliefs of authority (type C) which we all have, as well as who to trust or not as authorities in certain matters[11-14]; beliefs derived from authorities we identify with (type D) and inconclusive beliefs (type E) that encompass our conceptions, are more susceptible to changes and do not affect the total system of beliefs when changed. They refer to questions of taste, preferences[14-15].

For the assessment of the belief influences in the process of treatment adherence, we analyze whether the measures and educational strategies produce the desired effect. The paradigm-breaking, in HF approach, has shown that non-pharmacological treatment is no longer a simple complement to Pharmacotherapy, becoming an integral and indispensable part of

the beliefs assessment as factors that hinder therapeutic efficacy.

Therefore, we perceive a gap in the scientific area about health professionals' knowledge in relation to the beliefs of patients with HF. This unfamiliarity can influence the lack of adherence to the clinical and pharmacological treatment of HF, in addition to a nursing care that may not generate impact on the patient's quality of life.

In this context, we wondered: *what are the beliefs that hinder the treatment adherence of patients with HF?* Thus, the objective is: to identify the beliefs, according to Rokeach referential, related to HF that difficult treatment adherence.

METHOD

A descriptive study with a qualitative approach, conducted with participants registered in the Family Health Strategy (FHS) of Gruta de Lourdes, in Diamantina-Minas Gerais/Brazil. The aforementioned FHS has an estimated population of 3,150 people registered, approximately 750 families.

The data were collected after approval by the Ethics on Research Committee of UFVJM, CAAE n°27920314.6.0000.5108, opinion nº606,401. We included patients with medical diagnosis of CHF for at least 1 year. We excluded from this study those who did not present mental capacity, registered in the medical record, that can impair the speech coherence. Participants who were not at home to participate in the survey, were also excluded.

The participants survey was conducted by active search, on the Form A, in the records of the unit, in which the data were obtained for identification, diagnosis and address. With the help of Community Health Agents (CHA), users who fit were met at home and invited to participate in the research. After agreeing to participate in the study, the participants signed a Free and Informed Consent term– FIC.

The data were collected from June to August, 2016 through semi-structured interview. The interviews that could not happen in the first approach, were rescheduled, according to the participant's availability, ensuring the confidentiality and the privacy of the subject. The variables that showed up in the data collection instrument to interview, were: *epidemiological and health profile, and types of beliefs related to HF and treatment.*

The interviews were conducted by a team of interviewers, properly trained, monitored and introduced to the users by the HCA. The beliefs were classified in categories according to Rokeach 1981 references[14].

The interviews lasted 40 minutes and were recorded in mp3 equipment to preserve the full content of the statements. After collection, the interviews were entirely transcribed and typed by the researchers of this study.

The interviews were analyzed, following in the footsteps of Grounded Theory[16]: a) encoding: data were encoded substantively b) categorization: data were compared and codified during the whole process of analysis; c) gradual development of the theory in data collection and analysis; d) creating categories, record of analytical thoughts and comparison of relations between the categories. The analyses were carried out in the Statistical Package for the Social Sciences (SPSS® 23.0).

From these steps of analysis, we could understand and sort the participants of the survey "beliefs types". Analyses were made based on descriptive statistics and presented in graphs and tables. In addition, we selected as the study variables: sex, age, race, religion, occupation, education, income and health insurance. For the present study, we used a convenience sample of 29 participants.

RESULTS AND DISCUSSION

Of the 29 participants, three were excluded because they were not at home. Of the 26 respondents 50.0% were female and 50.0% male. Their age was between 30 to 89 years old, and the average was 66 years old. Most respondents were brown skinned (54.0%), followed by black and white (39.0% and 8.0%, respectively) retired (73.0%), most previous occupation farmers (27.0%), rural producers (15.0%), domestic workers (19.0%), miners (8.0%), bricklayers (8.0%), among others.

About income, 65.0% receive minimum wage, 31.0% two minimum wages and 4.0% a salary and a half. None of the survey participants was associated with a health insurance; 31.0% were smokers and 19.0% drink socially. And 27.0% are former smokers and alcohol consumer.

As for education, 50.0% were illiterate, followed by the ones with incomplete primary school (31.0%). In the cross-sectional study, it was pointed out that the low level of schooling affects people's health conditions, hindering understanding of information and, consequently, adherence to treatment, increasing the exposure to risk factors[17]. Educational action for a ludic and dynamic component would contribute to a better clarification of this population[3-17].

Among the participants, 100.0% had CHF-related diseases, as Table 1 shows.

Table 1: Health problems associated with the HF, identified in the interviews. Diamantina, Minas Gerais, Brazil, 2016.

Preexisting Diseases	N	%
SH	26	88,0%
Acute Myocardial Infarction	10	35,0 %
High Cholesterol	10	35,0%
Cardiac Valve Disease	3	11,5 %
Chagas Disease	2	8,0%
Diabetes Mellitus	2	8,0%
Cardiac Arrhythmia	2	8,0%
Coronary Artery Disease	5	16,0%

Source: Authors.

As to the beliefs related to the cause of the disease identified, in Figure 1 we show the ones selected during the interviews.

Figure 1: Types of beliefs identified related to the cause of the disease. Diamantina, Minas Gerais, Brazil, 2016.

Código Sujeito	Types of beliefs	Examples of cause of disease-related beliefs (CHF)	Cause Assigned
4, 9, 17, 24	A	- "From birth. I was born this way". - "It must run in my family". - "it's in the blood". - "I believe I was born with the disease. Since I was a kid my legs swelled". - "It runs in the family, my mother died with that and all my brothers have".	Hereditary/genetic factors
3, 6, 14,21	A	- "Because since I am 20 I had high blood pressure". - "My blood pressure was high and at first I didn't pay attention to the blood pressure (...) it was the cause". - "Because I always had the problem of high blood pressure".	High blood pressure
23,	A	- "I had rheumatic fever that then caused the cardiopathy". - "It was because of heart murmur".	Other heart disease
25,21	A	- "It can be the age, because everything appears after".	Ageing
8,18,	B	"I think it was a canjica with meat that I ate, and I felt bad and I woke up in the ER". - "I think it was the food, I eat everything".	Food
7	B	- "I think it was smoking, because when I started taking the meds, I coughed a black thing, then I quit smoking".	Smoking
19,12, 13,23, 11	B	- "I think it's was a very strong shock that I had with my boy's accident. My kid drowned and since then I had problems. The following year my other son died, he fell down the mountain. And some years later, two more kids died. It is really sad.". - "I was very well and quiet, I lived on the other side of the river and then I came here (to the city) and I got sick, from that day here I take the meds". - "I don't know if it's too nervous, I get very angry". - "I'm very soft-hearted, when you have Family you are too soft-hearted and everything we feel in the heart".	Stress/Concern Sadness/Emotions
2, 5, 20, 22	B	- "I got sick because I work too much". - "I worked day and night and took a lot of weight. I got tired and got sick". - "I was very bad: I took too much weight. I didn't sleep well at night and worked a lot the other day".	Too much work
1, 16, 22	C	"The doctor said the heart veins close".	AMI

Source: Authors.

As noted in Figure 1, most beliefs are assigned to emotional causes, followed by overwork, high blood pressure, hereditary factor/genetic predisposition, eating habits and related to ageing and as a consequence of a preexisting disease.

As for types of beliefs, there was a predominance of more central (types A and B) (Table 2). The belief of type B (46.0%) was the one more mentioned by the participants, followed by type A (42.0%).

Type B's beliefs are extremely resistant to change, because they originate from subjective experiences and do not depend on social support. The consensus type A are the ones that rely on a unanimous consensus and are also difficult to modify.

Table 2: Types of beliefs distribution, according to Rokeach referential (1981), related to the cause of the disease. Diamantina, Minas Gerais, Brazil, 2016.

Types of Beliefs	N	%
Type A	11	42,0
Type B	12	46,0
Type C	03	12,0
Total	26	100

Source: Authors.

In Figure 2, we identified the beliefs related to the difficulty on treatment adherence issued by the participants.

Figure 2: Types of beliefs and examples related to difficulties on treatment adherence by participants. Diamantina, Minas Gerais, Brazil, 2016.

Code Subject	Types of Beliefs	Examples of beliefs related to the difficulty on treatment adherence
12, 04,02	A	- "Quitting smoking is very difficult. I can't: I feel sick".
03, 04, 21,23, 24, 25,26	B	- "It's really difficult to get an appointment with a cardiologist every 4 month, it's really hard!". "It's hard to go into town. I have to take the bus and the legs don't help. And all you have to solve there. Sometimes, you have to pay, and the queues are big". - Those treatments are really silly. I have to do exams every 6 months to see how is it". - "I think I don't need to buy the meds because I would need the whole salary to pay for them". - "When I feel pain, I take Paracetamol". - "A tea makes me feel better. I don't like to go to the doctor If doctors were good, they wouldn't die". - "I don't really go to the doctor frequently. I put some alcohol with salt and it's ok".
09,16,17	D	- "I take the medicine that the people tell me".
08,18, 15	E	-"The most difficult is the food, stop eating certain things I ate my whole life". - "The food, no one will force you to eat if you don't want to".

Source: Authors.

The presence of some conditions, risk factors, as SH, DM, Chagas disease, obesity, among others, promote myocardial remodeling and cardiac structural changes, as an attempt to adapt with the disease[7]. In this study, most patients have conditions associated with HF, the most presented were SH, acute myocardial infarction (AMI) and high cholesterol (Table 1).

HAS and the DM were presented in other studies very correlated to HF[14-16]. In the present study, 88.0% of respondents had HAS and 15.0% had DM associated with HF. A Brazilian study conducted with participants presenting HF, also presented similar results[13]. Of the 239 patients evaluated, 84.0% had HAS and 25.0% DM[13].

Relevant risk factors evidenced in respondents, were the use and/or abuse of alcohol and/or tobacco. Alcoholism and smoking are frequent life habits, important in HF development[14,17-18].

Such data was also found in the present study, since 50.0% of the respondents were smokers and 8.0% drink alcohol. It is worth noting that alcoholic cardiomyopathy may develop in patients with a history of excessive alcohol consumption[16-20]. It is believed that this behavior, by itself, is the cause of 4.0% of heart failure cases[15-21]. The mechanism depends on the toxic effects of this substance on the heart, causing cell damage and cardiac enlargement.

With early alcohol abstinence, this damage may be reversible[20-21].

Beliefs (most types B and A), related to the cause of the disease, were considered important components of explanatory models and belief systems. Although the cause can be considered individually, the beliefs can be grouped into external and internal causative factors.

External causes are those perceived as outside the influence of the individual (overwork, family problems, diet, smoking, for example), while the interns are related to body (MI, associated diseases, hereditary/genetic). The belief that the disease was caused by external factors was prevalent, and the internal causes were perceived as minimal, when evaluated. It should be noted that stress, particularly in view of external stressors, was seen as the cause of the disease.

The occurrence of depression in patients with chronic HF is associated with reduced functional capacity and worse prognosis[18-19].

Some participants had difficulty in differentiating HF from other heart diseases, so they may have referred to the cause of the problems of general failure and not specifically to the HF. The influence of lifestyle factors, such as smoking, was minimized in the context of external factors.

Due to the family characteristics of some HF etiologies, it would be necessary, in case of suspicion, a family assessment and monitoring[21].

About the beliefs related to the elements that difficult treatment adherence, most were core beliefs types B and A. The respondents reported beliefs related to lack of access to medical service, delay in appointments, in addition to the difficulties in transportation/mobility to the health service. In studies on treatment adherence in patients with HF, the economic issue is one of the limiting factors for treatment adherence, as well as the excessive referrals and the delay in getting assistance[18-21].

It is worth mentioning that the participants also expressed disbelief in medical treatment. Studies describe the cause of the treatment failure, related to patient-physician interaction, is due to the lack of dialogue and inadequate guidance regarding the treatment of HF[19-22].

The beliefs on lifestyle changes, such as ingesting a low-fat diet, were not specifically discussed about HF control, but seemed to be described as part of a "healthy lifestyle" global strategy or reply to comorbidities.

Some specific behaviors of illiterate participants, related to the diet, such as reduction of salt and water intake, were rarely described, suggesting a lack of understanding of their purpose in relation to the disease.

Several participants mentioned the use of medicines, although only 1 (one) has no belief in the importance of their use in the treatment of the disease.

FINAL CONSIDERATIONS

In the present study, most of the HF patients were elderly, with low household income and low level of education. The belief Rokeach referential was important to identify the types of beliefs more present in this patients in relation to HF.

Types A and B beliefs were the most outstanding and central, because they are more related to the centrality of the beliefs, more difficult to suffer modifications. The prevalence of most central beliefs may indicate that low treatment adherence is, in part, defined by the fact that the individual's necessary changes, to have a successful treatment, are not happening because they are not properly addressed in the health care process.

This fact reflects the inadequate approach carried out by health professionals, which probably, considered the patient as a whole: physical, mental, social and cultural and their beliefs/knowledge about the disease.

In this way, the beliefs are an essential element that influences the treatment adherence. It is suggested that the professionals establish agreements with their patients as a way to promote a relationship of responsibilities among them, so that every step is part of an established health agreement.

The present work may contribute to the daily practice of nursing, to rethink practices of dialogue with the chronically ill people, individualized treatment, meeting their needs for information, respecting their cognitive skills, cultural beliefs and economic situation. It can contribute to the scientific community, since research on beliefs and processes of HF treatment adherence, still present a knowledge gap.

The limitation of the present study was the small sample number and the impossibility of an association statistical test, to infer physical,

clinical and emotional factors that could be related to HF. Future research can complement these associations with clinical laboratory experiments to improve HF treatment adherence.

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Mailing address:
Rosamary Aparecida Garcia Stuchi
Street José Rosa de Matos, nº 162 - Bairro Fátima
ZIP CODE: 39100000 Diamantina/MG Brazil
E-mail: meirestuchi@uol.com.br