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Heart failure: expressions of personal knowledge about the disease*

INSUFICIÊNCIA CARDÍACA: EXPRESSÕES DO CONHECIMENTO DAS PESSOAS SOBRE A DOENÇA

INSUFICIENCIA CARDIACA: EXPRESIONES DEL CONOCIMIENTO DE LAS PERSONAS SOBRE LA ENFERMEDAD

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ABSTRACT

This qualitative study characterized individuals with heart failure (HF) according to their sociodemographic, health, and treatment profiles and analyzed their knowledge on the disease and its treatment. A total of 42 volunteers with HF were interviewed at a cardiology hospital in São Paulo using a semi-structured questionnaire; the data were subjected to content analysis. The sample comprised mostly males and individuals older than 45 years old; the sample was classified as functional class II with associated comorbidities and was subjected to pharmacological treatment. The type of knowledge exhibited by the sample was illustrative, diagnostic, and explanatory, and many different meanings were attributed to the disease. Most volunteers did not know the names, doses, or frequencies of use of their medications. Non-pharmacological treatment was identified as related to the information provided by the healthcare professionals about nutrition and salt and water intake. The results pave the road for systematic educational interventions that can improve the coping with and management of this disease.

DESCRIPTORS

Heart failure
Knowledge
Health education
Nursing care

RESUMO

Pesquisa de natureza qualitativa que teve como objetivos caracterizar pessoas com Insuficiência Cardíaca (IC) segundo perfil sócio-demográfico, de saúde e de tratamento e analisar o conhecimento sobre a doença e tratamento. Foram entrevistados 42 pacientes com IC, em um hospital de cardiologia de São Paulo, foi utilizado questionário semiestruturado e análise de conteúdo dos dados. Predominou sexo masculino, idade maior que 45 anos, classe funcional II, comorbidades associadas e tratamento farmacológico. Da análise de conteúdo emergiram as categorias: conhecimento sobre a doença e conhecimento do tratamento. O conhecimento é ilustrativo, diagnóstico e explicativo, sendo atribuídos muitos significados à doença. A maioria desconhece nome, dose e frequência de uso dos medicamentos. O tratamento não farmacológico está relacionado às orientações dos profissionais de saúde sobre alimentação, sal e ingesta hídrica. Os resultados abrem perspectivas para intervenções educativas sistematizadas que possam contribuir para um melhor enfrentamento e manejo da doença.

DESCRITORES

Insuficiência cardíaca
Conhecimento
Educação em saúde
Cuidados de enfermagem

RESUMEN

Investigación de naturaleza cualitativa que tuvo como objetivos caracterizar personas con Insuficiencia Cardiaca (IC), según el perfil sociodemográfico, de salud y de tratamiento; así como, analizar el conocimiento sobre la enfermedad y el tratamiento. Fueron entrevistados 42 pacientes con IC, en un hospital de cardiología de Sao Paulo, se utilizó un cuestionario semiestructurado, cuyos datos fueron tratados por el análisis del contenido. Predominó el sexo masculino, edad mayor a 45 años, clase funcional II, con enfermedades asociadas y tratamiento farmacológico. Del análisis del contenido surgieron las categorías: conocimiento sobre la enfermedad y conocimiento sobre el tratamiento. El conocimiento es ilustrativo, diagnóstico y explicativo, atribuyéndose muchos significados a la enfermedad. La mayoría desconoce el nombre, la dosis y la frecuencia del uso de los medicamentos. El tratamiento no farmacológico se relaciona con las orientaciones de los profesionales de salud sobre alimentación, sal e ingestión hídrica. Los resultados revelan perspectivas para intervenciones educativas sistematizadas que puedan contribuir a un mejor enfrentamiento y manejo de la enfermedad.

DESCRIPTORES

Insuficiencia cardiaca
Conocimiento
Educación en salud
Atención de enfermería

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INTRODUCTION

Heart failure (HF) is the final common pathway of most cardiologic diseases and poses one of the major current clinical challenges in the field of health. The study of HF is relevant as a function of its epidemiological and clinical traits and also because its magnitude and significance make it a serious public health concern(1).

The increased life expectancy and longevity observed in developed countries might exert considerable influence on the epidemiology of HF. Approximately 23 million individuals exhibit HF, and two million new cases are diagnosed every year worldwide. Approximately 6.5 million people in Europe, five million people in the United States, and 2.4 million people in Japan currently exhibit HF(2-3).

In Brazil, an estimated 6.4 million people are affected by HF. HF causes high hospitalization costs, a large number of visits to emergency rooms, reduced quality of life, and early retirement, thus imposing a high cost to the country(4).

In 2007, cardiovascular diseases were the third leading cause of hospital admissions within the Brazilian Unified Health System (Sistema Único de Saúde - SUS), corresponding to 1,156,136 instances. As the most frequent cardiovascular cause of hospitalization, HF accounted for 2.6% of hospital admissions and 6% of the deaths in Brazil in 2007 and utilized 3% of the resources allocated to hospital admissions within the SUS(4).

> The study of Heart failure is relevant as a function of its epidemiological and clinical traits and also because its magnitude and significance make it a serious public health concern.

As a function of its natural history, the prevalence of HF is higher among older adults and represents the first cause of hospital admission among individuals older than 60 years old in Brazil(1,5).

Because the elderly population is growing in Brazil, the number of patients who are at risk of developing or have HF is also increasing(6). In 2011, cardiovascular diseases accounted for 8.5% of the mortality in the state of São Paulo(5).

Data collected in the United States show that the most common triggers associated with hospital admissions due to HF are lack of compliance with the prescribed dietary sodium and fluid restriction, acute myocardial ischemia, inappropriate blood pressure control, heart arrhythmia, recent onset of new medications (especially beta-blockers and diltiazem), pulmonary embolism, use of non-steroidal anti-inflammatory drugs, abuse of alcohol or illegal drugs, endocrine decompensation (diabetes and hyper- or hypothyroidism), pneumonia, and viral infections(7).

HF treatment is becoming increasingly complex due to the use of many types of drugs. The aim of treatment is not only to reduce mortality and morbidity, but also to improve the quality of life and decrease the onus of treatment for the public health system, particularly by reducing the number of hospital admissions(8).

Despite novel technologies developed to improve the state of health and quality of life and to reduce the expenses of chronic diseases, few studies have assessed the knowledge of patients with HF on this disease and its treatment.

In regard to what type of knowledge might be relevant in the case of HF, no systematic data on specific knowledge can be found in the literature. However, some studies point to similarities relative to the significance of some educational topics, such as fluid restriction, daily weight, and recognition of the signs of clinical aggravation, such as shortness of breath and swelling(9).

A Brazilian review concluded that nurses must take an active role in promoting the adherence of patients to treatment and emphasized the recommendations formulated in the III Brazilian Guidelines for the Treatment and Diagnosis of HF, which are educating about disease, monitoring body weight, and identifying the signs and symptoms of decompensation. Additionally, education relative to the use of medication, physical activity and rest, diet, and social activities is recommended(1).

The aim of the present study was to characterize individuals with HF according to their sociodemographic, health, and therapeutic profile and investigate their knowledge on HF and its treatment.

METHOD

This exploratory, descriptive, and qualitative study sought to identify and understand the knowledge that patients have regarding HF and its treatment.

The study was conducted at the outpatient clinic of the Heart Institute (Instituto do Coração – InCor) of the Clinical Hospital, Medical School of University of São Paulo(10), located in the city of São Paulo. Data collection was performed from March 17 to April 30, 2010.

The study was approved by the Ethical Commission for Analysis of Research Projects (Comissão de Ética para Análise de Projetos de Pesquisa – CAPPesq) of the Clinical Director Office of the Clinical Hospital and Medical School of University of São Paulo (research protocol No. 0017/10).

The study population comprised 42 volunteers diagnosed with HF who met the following inclusion criteria: diagnosis of HF registered in their clinical records; functional class II and III (according to the *New York Heart Association* – NYHA) at the last visit, as registered in the clinical records; and age equal to or over 18 years old.

The selection of functional classes II and III allowed for the recruitment of outpatients. Functional class I was excluded because it presupposes that patients are in a stable clinical condition, while class IV was also excluded because the patients are usually hospitalized or in a state that hinders their participation in studies like the present one. Patients who were undergoing dialysis and scheduled for transplantation were excluded. The transplant patients were excluded because they are likely to present diseases or comorbidities that could influence the interpretation of the result of the interview.

The sample size was determined according to other studies that used similar methods and were published in SciELO and PubMed databases.

All volunteers were invited, and an informed consent form was signed before individual interviews were conducted.

For the interviews, a *Data Collection Instrument* was used, which comprised three parts: 1) identification and sociodemographic data (age, gender, ethnicity, marital status, religion, educational level, provenance, occupation, income, residence, and dwelling); 2) health and treatment profile (diagnosis, family history, comorbidities, medications, and fluid and salt restriction); and 3) knowledge about the disease and its treatment (open-ended questions).

The interviews were performed at the nursing office by the principal investigator and lasted 30 to 45 minutes. They were taped and then fully transcribed, resulting in 29 pages of material for analysis(11).

The interview content was analyzed by means of the content analysis method(12). Content analysis can be defined as a

> set of techniques for the analysis of communication to obtain indicators allowing for the inference of the knowledge relative to the conditions of production/reception of messages by means of systematic and objective procedures for the description of the content of the messages. Thus, it allows making the message content, as well as the content expression, explicit and systematic by means of a set of partial and complementary techniques(12).

The interviews were transcribed and organized in a digitized document. The transcription of each interview was identified by letter *P* (participant) and a number corresponding to the sequential order of the interviews, placed between brackets at the end of the transcription.

In the present study, a semantic criterion was used to establish categories. That is, theme-based categories were elaborated, and the corresponding themes were subsumed under one and the same heading.

Next, the interviews were subjected to reiteration and a thorough reading, which allowed them to be analyzed based on themes and words that had the same meaning, which was followed by decoding and elaborating the categories for analysis. The next step included attribution of meaning, validation of the results, performance of inferences and interpretations, and analysis of the results based on the theoretical framework for health education and learning and on the results of other studies.

Analysis of the interviews content led to the elaboration of two categories: knowledge of HF and knowledge of the treatment of HF.

RESULTS

First, the volunteers are characterized, followed by the results based on the categories derived from the analysis of the interview content as a function of the aims of the present study.

Characterization of the volunteers

The volunteers were mostly male (57.1%), older than 45 years old, married, Catholic, with poor educational level (73.6%), and residents of the São Paulo Metropolitan Area. Most had low family income, up to the equivalent of three times the minimum wage (52.2%). Most had low-level jobs; 18 (42.8%) were retirees; and eight (19.0%) were unemployed.

Relative to the health profile, 22 (52%) exhibited HF functional class II of predominantly ischemic and hypertensive etiology. Thirty (71.0%) volunteers reported a family history of cardiovascular disease.

The data in Table 1 show that despite the predominance of systemic hypertension as a comorbidity, chronic myocardial ischemia and type 2 diabetes were also significant. Less frequent were dyslipidemia and heart arrhythmias, and even less common were heart valve disease, chronic kidney failure, obesity, hypothyroidism, lung disease, rheumatic fever, and stroke. Although Chagas disease is the main cause of HF in endemic areas and the third leading cause of HF in Brazil(1), only one volunteer exhibited Chagas disease.

Table 1 – Distribution of the number and percentage of volunteers with heart failure according to their associated comorbidities – São Paulo, SP, 2010

Associated comorbidities	Volunteers	
	N	%
Systemic hypertension	30	71.4
Chronic coronary disease/ischemia/infarction	14	33.3
Type 2 diabetes	12	28.5
Dyslipidemia	10	23.8
Arrhythmias (atrial fibrillation, total atrioventricular block, left bundle branch block)	9	21.4
Heart valve disease	5	11.9
Non-dialysis chronic kidney failure	4	9.5
Obesity	4	9.5
Hypothyroidism	4	9.5
Chronic obstructive pulmonary disease	3	7.1
Rheumatic fever	2	4.7
Stroke	2	4.7
Chagas disease	1	2.3
Other (anxiety, sinusitis, depression, cancer, lupus, gout, osteomuscular problems)	7	16.6

Relative to the treatment profile, most patients had been under treatment for one to five years (60.0%), and the interval between the visits to the outpatient clinic varied from zero to three months or from four to six months. The main drugs prescribed, as registered in the clinical records, were beta-blockers (100.0%), loop diuretics (78.0%), and angiotensin-converting enzyme (ACE) inhibitors (74.0%). Most volunteers were independent from other people to help with medications. Thirty-six (86.0%) volunteers had been given instruction as to the use of medication at the hospital, mostly by a doctor (43.0%). Thirty-six (86.0%) patients controlled their dietary salt intake, and 30 (71.0%) controlled their fluid intake.

The medications prescribed, as registered in the clinical records, are described in Table 2.

Table 2 – Distribution of the volunteers with heart failure according to the prescribed medication, as registered in the clinical records – São Paulo, SP, 2010

Prescribed medication	Nº	%
Beta-blockers (carvedilol, metoprolol)	42	**100.00**
Diuretics		
Furosemide	33	**78.5**
Hydrochlorothiazide	17	40.4
Spironolactone	18	42.8
IECA (Captopril, Enalapril)	31	73.8
Anticoagulantes ou Antiagregantes Plaquetários	26	61.9
Digoxina	23	54.7
Sinvastatina/Atorvastatina	18	42.8
Omeprazol	12	28.5
Bloqueadores do canal de cálcio (Anlodipina)	11	26.2
Hidralazina e Nitrato	10	23.8
Antagonista de Aldosterona (Losartan, Valsartan)	8	19.0
Hipoglicemiante oral	10	23.8
Hormônio Tireoideano	7	16.6
Insulina	6	14.2
Antiarrítmicos (Amiodarona)	2	4.7
Outros (Sertralina, Alupurinol, Clonidina, Ciprofibrato, Clonazepan)	12	28.57

The categories relative to the knowledge about disease and its treatment are discussed below, together with quotations from the interviews to illustrate and exemplify the categories applied. As a whole, the interviewees described their experience; the strategies they used to cope with this disease, which is chronic and disabling; and their sources of support and stimulus relative to the experience of the disease.

Knowledge about the disease

In all 42 cases, the onset of disease was associated with *the moment when the volunteers first exhibited a clinical manifestation of HF*, as some of the narratives describe below. The letter *P* and the following number identify each participant based on the order in which they were interviewed.

> I had the heart attack on May 11 2002; my blood pressure used to be high; I'd take the remedies; but the pressure was always high and uncontrolled. I don't know how to explain this to you. I believe that this disease is something evil (P12).

> That's a difficult question, I'd like to know more about it, but don't know… I know it's something in the heart, but I don't know what. Don't know if it's Chagas disease… some seven months ago I had short-breath, five or six months ago the legs started swelling up, and I was no longer able to walk. I don't know what the problem is, just that it's in the heart (P15).

According to 21 interviewees, the onset of disease was associated with wandering through the healthcare services until they were referred to a cardiology center, as illustrated by the narrative below.

> Six years. I found out when I was driving to Ipiranga and began throwing up; I threw up once and again, felt a strong pain in the chest; I had to stop the car for one hour. I went to the hospital at Ipiranga, was in very poor shape when I got to the ER, very poor indeed; the guys laid me on a table, and thus I found out I had a heart problem. I stayed 30 days at the hospital in Ipiranga and then was referred to InCor. Here, at the hospital, the feeling of an internal pressure on the heart improved, that pressure on the chest is less. I've suffered a lot. I'm very thankful to InCor; I also went to the Cotoxó [hospital]. I was treated as a king at the hospital, never lacked anything: medicines, nurses... (P17).

An analysis of the interviews showed that recognition of the onset of disease was associated with the moment the volunteers required emergency assistance, the clinical manifestations they exhibited, or wandering through the healthcare services until the diagnosis of HF was made and proper treatment was started.

Twenty-four volunteers (57.2%) could not name the disease that had led to HF or the diagnosis of HF, while 18 (42.8%) could.

> Nothing, nothing, that this is no good. It's about the heart. I don't know. I don't know what the disease is. They said my heart had swollen up. But, I don't know why it swelled up (P03).

Content analysis of the interviews relative to category *knowledge about disease* resulted in three sub-categories that reflect the type of knowledge exhibited by the volunteers relative to their disease, including *illustrative*, *diagnostic*, and *explanatory*, as depicted in Figure 1.

Illustrative knowledge alludes to a merely illustrative knowledge relative to the heart problem. This type of knowledge is manifested through the use of peculiar adjectives to describe HF, such as *swollen heart*, *weak heart*, or *large heart*. Diagnostic knowledge links the heart problem with a medical condition, such as *infarction*, *high blood pressure*, or *Chagas disease*. Finally, *explanatory knowledge* involves the use of explanatory models in the description of the heart problem, such as *the blood doesn't circulate through the body*, *low ejection fraction*, and *it sends less blood to the veins*.

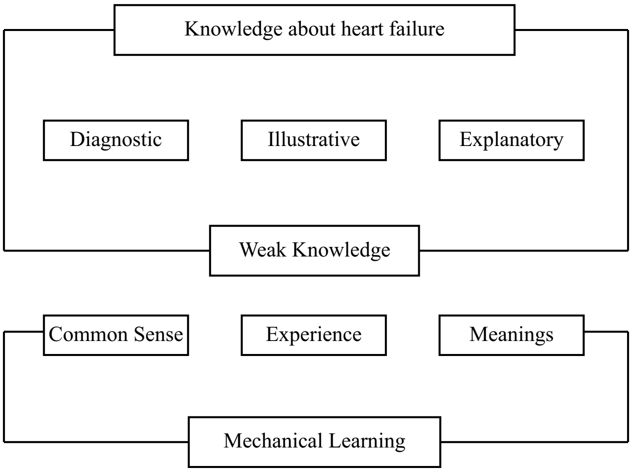

Figure 1 – Representation of the interviewees' knowledge about heart failure

The categories used for analysis showed that the volunteers manifested insufficient, *weak knowledge*, which impaired their understanding of the heart problem and thus also their ability to manage the disease. The analysis also showed that knowledge was the product of common sense, experience, and meaning.

The knowledge that the volunteers had about the disease was not associated with anything they knew before. Thus, the new information was assimilated as such, i.e., with no interaction whatsoever with relevant notions already present in the cognitive structure. As a consequence, they memorized rules and laws but forgot all of them after the assessment(13).

Thus, health education must be designed to awaken the interest of individuals with HF to learn about their disease. Patient education must integrate popular knowledge and common sense with scientific ideas. This integration would allow individuals to associate the information and give meaning to it.

Knowledge about treatment

Content analysis of the interviews showed that, from the volunteers' perspective, treatment of HF is based on the *use of medication; the control of diet, salt, and fluid intake; medical follow-up; nursing instruction; assistance by healthcare professionals;* and *performance of tests*.

An analysis of the participants' responses showed that all of them knew that *pharmacological treatment* is indicated for the control of disease. For most participants (33 or 78.5% of volunteers), pharmacological treatment has been the main strategy for managing the disease.

> Indeed, I take the remedies perfectly right (…) Now I'm a lot better (P25).

> I only take the remedies they give me here, the ones the doctor tells (P20).

According to 20 (47.5%) volunteers, the effect of pharmacological treatment is manifested as control, recovery, and improvement of signs and symptoms, as described below.

> ...if it wasn't for the control of disease that treatment achieved, I'd have already died. Treatment improved my life... (P35).

> If you don't achieve control, treatment goes nowhere… treatment serves to recover something... (P05).

A little more than half of the participants (22, 52.3%) considered the pharmacological treatment as *Excellent, very good and positive; It changed things for the best; Slow; Complex; Makes one suffer; and It will last forever because this disease can't be cured*

Some patients (24%) reported some neglect, forgetfulness, irregular or improper use of the medication.

> Sometimes I let go a bit. I do take the remedy, but when I get better, I sort of let go (P10).

> My fault because I didn't take the remedies as I should, 15 pills every day, I could not take it anymore, no way. So, I'd just take one remedy in the morning and then another only in the evening; some days I took them all, other days just half of them (P32).

The volunteers were able to identify that pharmacological treatment controlled the disease. Nonetheless, most patients ignored the names, doses, and frequency of use.

Only 12 (28%) volunteers knew the names of all drugs they used, five (12%) knew the dose of all, and 10 (24%) knew the frequency of all.

From the participants' perspective, *knowledge about non-pharmacological treatment* relates to the information provided by the healthcare professionals relative to diet and salt and water intake. They mentioned abstaining from alcohol, monitoring blood pressure, performing leisure activities, reducing stress, and resting as needed less frequently, as the following narratives show.

> I comply with the treatment and the doctors' orientations as if commanded by God. I control the intake of salt very well, and the one of water too (P07).

> What I do is to try to avoid drinking. I don't drink any longer (...) (P18).

Relative to the relationship between the diet and control of HF, 23 (55%) interviewees reported paying close attention to the everyday meals to avoid any excess in the diet.

> ... Not to eat pasta, fat, and salt. I banished all that, salt, fat, so that I live a good life. I do everything you tell me to do (P21).

> I control salt and fat because of the cholesterol (P23).

According to 19 (45%) volunteers, non-pharmacological treatment consists of following the instructions given by doctors, nurses, or nutritionists.

Within the context of non-pharmacological treatment, 13 (31%) volunteers reported using other strategies of care, such as stress avoidance, relaxation, rest, and performance of leisure activities.

However, the analysis of the interviews also found expressions of lack of knowledge or inappropriate management of the non-pharmacological treatment, such as excessive intake of water and a lack of salt restriction.

> I control the salt in food, drink much water and other beverages, much passion fruit juice (P06).

> I don't control salt and water; I don't feel anything [wrong] when I eat salty food (P08).

The interviews also disclosed the patients' difficulties with complying with treatment. Some of the expressions denote insufficient care based on the idea that the effect of treatment is slow or too complex, while some volunteers reported discontinuing the medication because they did not know what the effect of treatment was.

> However, then, the effect of all those remedies adds up, and I feel week; I have to stay in bed until the effect of the remedies goes away (P11).

> Those remedies are risky because they might confine me to the bed (P24).

As a result, the *management of* pharmacological or non-pharmacological *treatment* was either regular or irregular, as shown by the narratives below.

> I try to take the medications properly and exactly as they tell me to do. No use to go and say I don't like the medication (P12).

> (....) it was 15 pills every day; I couldn't take it any longer, no way… I'd take only one in the morning and then another one only in the evening; some days I took them all, other days only half of them… I wouldn't feel anything [wrong] when the blood pressure rose up (P32).

An analysis of the interviews also found expressions denoting an *internal disposition* of the volunteers to *take care of themselves* that was motivated by the will to avoid decompensation of disease and to keep themselves alive by understanding what the disease is about or based on their faith and the love of their families, as the transcripts below show.

> I know this is a serious disease, and that I should be careful (…) I care for myself as much as I can to avoid it getting worse (P42).

> (...) I'm fighting to stay alive. I want to see my granddaughter grow up and graduate (P38).

> For me, it's being good, very good. I hope God (….) (P25).

> I'm motivated by my family, my husband (...) (P28).

DISCUSSION

Content analysis showed that the volunteers first learned about the onset of disease at a well-defined moment in time, i.e., when they experienced the first manifestations of HF. Therefore, the knowledge of the onset of disease was constituted by the experience of an event that made a deep impact on the participants' lives.

As a rule, only a small number of patients with initial symptoms of HF are diagnosed quickly; most of them will undergo a long and difficult period before an accurate diagnosis is established(14).

Proper knowledge about the disease results from experienced events and common sense, rather than from meaningful learning. These findings suggest that the information provided by the healthcare professionals is not sufficiently understood by the interviewees. Consistently, educational action must consider the complexity of the patients with HF, and the nurses should ensure and implement educational strategies that address the specific needs of this population.

A study addressing the compliance of hypertensive patients with treatment showed that nurses play a significant role in increasing their adherence to healthy behaviors. Nurses must act directly to promote health and contribute to the early diagnosis of disease, which in the case of HF includes a timely identification of the signs and symptoms of decompensation. Once the disease sets in, nurses must strive to educate the patients about the benefits of the pharmacological and non-pharmacological treatments, the management of disease and its complications when it is not controlled, and the adoption of healthy lifestyles(15).

A study published in 2009 described the clinical and psychosocial characteristics of a group of patients with HF who were hospitalized due to clinical decompensation. That study showed that the peculiarities of the sociodemographic and clinical profile of the patients with decompensated HF must be identified to develop and implement efficacious educational orientation because this profile might vary as a function of the geographical area, local sociocultural characteristics, and availability of healthcare services(16).

Some authors have described the limitations of the clinical and hospital-based model of healthcare because this model overestimates the role of the healthcare professionals as the exclusive bearers of knowledge on the body and, thus, the able to decide on treatments, while the patients is nothing but a passive recipient of actions. Within this context, the peculiarities, emotional side, and subjectivity of and the relationships established by the ill individual are not considered(17).

For the abovementioned reasons, the information given to the patients must be subjected to validation, and new strategies for health promotion and meaningful presentation of the information given by healthcare professionals must be formulated.

Meaningful learning is the process through which new information (knowledge) is non-arbitrarily and substantially (non-literally) related with the cognitive structure of the learning individual. Within this process, the logical sense of the learning materials is transformed into a psychological meaning for the subject(18).

Learning becomes increasingly more meaningful as new information is incorporated into the knowledge structure and is associated with previous knowledge. Conversely, learning becomes mechanical or repetitive when incorporation and attribution of meaning occur less frequently; thus, new content is stored with no association to previous knowledge or is arbitrarily incorporated into the cognitive structure(17-18).

As concerns their learned knowledge on pharmacological treatment, the volunteers knew that it is indicated for the treatment of HF and that they should take the medications because they were able to control the disease and improve its signs and symptoms. However, they did not know the names, doses, and frequencies of use for the drugs that they took. In addition, they rated treatment as slow, complex, associated with suffering, and lasting for life.

Within the context of HF, knowledge bears a direct correlation with adherence to treatment. A descriptive study conducted at a hospital in Rio Grande do Sul with 252 volunteers showed that previous knowledge of non-pharmacological care and identification of the symptoms of congestion were correlated with adherence to treatment. This study further found that low adherence to pharmacological or non-pharmacological treatment was one of the main causes of decompensation of HF in 92% of the participants(19).

Therefore, by helping the patients acquire knowledge about HF and its treatment, the nurses play an important role because they promote adherence to healthy behaviors. Once the disease sets in, nurses must orient the patients as to the benefits of pharmacological and non-pharmacological treatment, management of disease and its complications when it is not controlled, and the adoption of healthy lifestyles. The relevance of nurses is based on their role as educators to motivate the patients to comply with treatment and concern themselves with their self-care by suggesting strategies to favor their involvement with the disease and its treatment(14).

According to some authors, although the learning process may lack systematization, people build and develop layman knowledge, which is also valuable and meaningful. Such knowledge is the starting point for transformation, and it might become an educational process that serves as the basis of knowledge if it supported by techno-scientific knowledge. That transformation is the challenge the healthcare professionals must meet(20-21).

CONCLUSION

The knowledge exhibited by the volunteers in the present study was impregnated by the experience of having and living with HF and focused on the signs and symptoms of HF and the everyday care needed to control the disease. These findings point to a more vivid type of knowledge than the conceptual one because it does not derive from technical and scientific data, but from the daily experience and management of HF.

In this regard, the assistance provided by nurses to patients with HF in the outpatient setting is crucial and must include actions focused on health education and self-care. Because education is a process that evolves over time and because lifestyles might only be changed when the individuals are open to the idea of changing, patients with HF should be sensitized to look inside themselves for reasons to search for knowledge and thus improve the management of their disease.

The limitations of the present study derive from its exploratory and descriptive nature, which restrict its scope to the investigation of the profile of the targeted population and its knowledge relative to HF and its treatment. However, those data pave the road for educational interventions to follow-up with these individuals in a more systematic manner. By raising problems, this study allows for new learning constructs to share knowledge of this disease, its treatment, and the strategies to cope with disease. Such follow-up might improve the experience of disease and the coexistence of people who are co-participants in the treatment process and, thus, must interact in a more empathetic manner and establish more intimate links (e.g., the relationship between the patient and healthcare professionals).

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