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RESEARCH

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Symptom experience in people with heart failure in the context of Symptom Management Theory

Experiência dos sintomas em pessoas com insuficiência cardíaca no contexto da Teoria de Manejo dos Sintomas

Experiencia de síntomas en personas con insuficiencia cardíaca en el contexto de la Teoría del Manejo de los Síntomas

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Abstract

Objective: to identify the experience of symptoms experienced by people with heart failure in functional classes III and IV, using the Theory of Symptom Management. **Method**: qualitative, descriptive method, was carried out in the cardiology outpatient clinic and inpatient units of a teaching hospital from January to June 2023, totaling 26 participants diagnosed with heart failure in functional class III and IV. The data were obtained through structured interviews and field diary notes and used to content analysis. **Results:** the average age was 65 years old, predominantly people from functional class III. Two thematic categories were obtained: "Perception of heart failure symptoms" and "Assessment of heart failure symptoms". **Conclusion and implications for the practice:** the main experiences identified were: perception of symptoms, such as dyspnea at rest or during exertion, fatigue, weakness, dizziness, chest pain and edema in the lower limbs; evaluation of symptoms, through the judgment of their origin, attributing them to other diseases, comorbidities, or HF itself, and the impacts on activities of daily living, evidenced by limitations in carrying out personal, hygiene, domestic or work activities. The study may contribute to the development of this nursing theory in the country, and supporting planning for individualized care.

Keywords: Heart Failure; Nursing; Patients; Signs and Symptoms Symptom Assessment.

Resumo

Objetivo: identificar a experiência dos sintomas vivenciados pela pessoa com insuficiência cardíaca nas classes funcional III e IV, pela Teoria de Manejo dos Sintomas. **Método:** estudo descritivo, qualitativo, realizado no ambulatório de Cardiologia e unidades de internação de um Hospital de Ensino, entre janeiro a junho de 2023, totalizando 26 participantes com diagnóstico de insuficiência cardíaca em classe funcional III e IV. Os dados foram obtidos por meio de entrevistas semiestruturadas utilizando-se da análise de conteúdo. **Resultados:** a idade média foi de 65 anos, predominando pessoas em classe funcional III. Obtiveram-se duas categorias temáticas: "Percepção dos sintomas de insuficiência cardíaca" e "Avaliação dos sintomas de insuficiência cardíaca". **Conclusão e implicações para a prática:** as principais experiências identificadas foram: percepção dos sintomas, como dispneia em repouso ou aos esforços, fadiga, fraqueza, tontura, dor torácica e edema em membros inferiores; avaliação dos sintomas, por meio do julgamento da sua origem, atribuindo-os a outras doenças, comorbidades, ou a própria insuficiência cardíaca, e pelos impactos nas atividades de vida diária, evidenciados pelas limitações na realização de atividades pessoais, de higiene, domésticas ou laborais. O estudo poderá contribuir para o desenvolvimento desta teoria de enfermagem no país e alicerçar o planejamento para um cuidado individualizado.

Palavras-chave: Avaliação de Sintomas; Enfermagem; Insuficiência Cardíaca; Pacientes; Sinais e Sintomas.

Resumen

Objetivo: identificar la experiencia de los síntomas que experimentan las personas con insuficiencia cardíaca en las clases funcionales III y IV, utilizando la Teoría del Manejo de Síntomas. **Método:** estudio descriptivo, cualitativo, recolectados en el ambulatorio de cardiología y en las unidades de internación de un hospital escuela, entre enero y junio de 2023, totalizando 26 participantes con diagnóstico de insuficiencia cardíaca en clase funcional III y IV. Los datos se obtuvieron a través de entrevistas semiestructuradas y notas de diarios de campo y se realizó el Análisis de Contenido. **Resultados:** la edad media fue de 65 años, predominando las personas en clase funcional III. Se obtuvieron dos categorías temáticas: "Percepción de los síntomas de insuficiencia cardíaca" y "Evaluación de los síntomas de insuficiencia cardíaca". **Conclusión e implicaciones para la práctica**: las principales experiencias identificadas fueron: percepción de síntomas, como disnea de reposo o de esfuerzo, fatiga, debilidad, mareos, dolor torácico y edema en miembros inferiores; evaluación de los síntomas, juzgando su origen, atribuyéndolos a otras enfermedades, comorbilidades o a la propia IC, y los impactos en las actividades de la vida diaria, evidenciados por limitaciones en el desempeño de actividades personales, de higiene, domésticas o laborales. El estudio puede contribuir al desarrollo de esta teoría de enfermería en el país, y apoyar la planificación de la atención individualizada.

Palabras-clave: Enfermería; Evaluación de Síntomas; Insuficiencia Cardíaca; Pacientes; Signos y Síntomas.

INTRODUCTION

Heart failure (HF) is a syndrome associated with aging and is viewed as the consequence of numerous cardiac pathologies, significantly impacting quality of life by causing a high rate of morbidity, mortality, and hospitalizations.[1] HF represents a global clinical challenge, impinging on health due to the symptom burden. Its chronic and progressive nature leads to an increase in incidence and prevalence, attributed to the gradual aging of the population and an economic burden for both patients and the health system.[2]

As a result of the heart's inability to pump sufficient blood to meet the body's demands, typical signs and symptoms manifest as a reduction in cardiac output at rest or during exertion.[1,3] These symptoms, including dyspnea, lower limb edema, dizziness, coughing, palpitations, fatigue, insomnia, difficulty breathing when lying down, dry mouth, inappetence,[4] paroxysmal nocturnal dyspnea, weight gain, abdominal pain, and orthopnea,[1] characterize the disease and its progression. They also cause limitations in activities of daily living and adversely affect functional, economic, and social performance.[1,2]

The New York Heart Association (NYHA) functional class (FC) classification is commonly utilized to assess the severity of cardiac symptoms and functional status.[5] It is based on exercise tolerance and the presence or absence of symptoms during habitual physical activity, ranging from the absence of symptoms to their presence at rest.[1,5] FCs range from I to IV; in the first two, symptoms are stable with fewer hospitalizations; classes III and IV are marked by severe, progressive symptoms, frequent hospitalizations, and a higher mortality risk.[1] A symptom is defined as a subjective experience involving changes in biological, psychological, and/or social functioning, altering a person's sensations and/or cognition.[6]

Thus, the physical symptoms of HF might be similar across individuals, but their impact on daily life varies. Consequently, understanding symptom experience is crucial for tailoring nursing care to this population.[7] With the goal of understanding the unique symptom experiences of individuals with HF, this study adopted the framework of the Symptom Management Theory (SMT), developed in 1994 by the School of Nursing at the University of California, San Francisco, USA. This framework aims to describe the multidimensional process of symptom management.[6,8] The SMT identifies three components: symptom experience, symptom management strategies, and outcomes. It also integrates three interconnected nursing domains for symptom management: the Person, the Environment, and Health and Illness.[6]

This study focused on the symptom experience component. The experience of symptoms is recognized as a dynamic process that encompasses perception, the evaluation of significance, and the response to a symptom.[8,9] Perception involves the individual identifying feelings that diverge from their normal state in terms of symptom frequency or severity; evaluation entails making judgments about the symptom's severity and its impact on daily life; the response is how individuals react to their symptom perception.[6,9]

The nursing domains, intertwined with the SMT components, reflect the person's factors influencing the theory's components. Domain 1 (Person) includes personal, demographic, psychological, and sociological variables relating to how symptoms are perceived and responded to. Domain 2 (Environment) covers conditions or contexts of symptom occurrence, including physical, social, cultural, home, and work environments, health institutions, social support networks, interpersonal relationships, beliefs, and values. Domain 3 (Health and Illness) consists of variables exclusive to the individual's health and illness state and associated risk factors, such as diseases, injuries, and/or limitations.[6,8,9]

Understanding symptom management according to the theory necessitates identifying the affected domain. SMT has spurred the development of studies on symptom experience, management strategies, and symptom management, particularly in oncology research, conceptual models, and theoretical discussions.[10] Although studies involving SMT in Brazil are in their infancy, international publications investigating symptom experience and management strategies in individuals with HF are available.[11-13]

Given that individuals with HF in NYHA FCs III and IV experience more intense symptoms and limitations in daily life, this study applied the theory to this population. Consequently, the guiding question was as follows: What are the symptoms experienced by individuals with HF in FCs III and IV in the light of SMT? This study aimed to identify, using the SMT approach, the symptoms experienced by individuals with HF in FCs III and IV.

METHOD

This descriptive, qualitative study was conducted at a university hospital in Paraná, Brazil, which serves as a reference in the Western macro-region, encompassing both inpatient units and the cardiology outpatient clinic. The study adhered to the Consolidated Criteria for Reporting Qualitative Research (COREQ).

The sample consisted of 26 participants, selected non-randomly, with a diagnosis of HF in FC III or IV. The inclusion criteria were as follows: being aged 18 or older; having preserved oral communication and hearing acuity; being aware of the HF diagnosis; and being classified as HF III or IV. Individuals with any form of cognitive impairment were excluded from the study. This criterion was assessed by the Cognitive Status Assessment questionnaire,[14] which was administered as the patient was approached for initial data collection. This included asking for their name, the current date, day of the week, location, age, and city of residence. Participants who provided more than two incorrect responses were excluded from the study.

Participants were selected and recruited by reviewing their electronic medical records and subsequently inviting them to participate, based on the established criteria. Data collection occurred in a dedicated room within the outpatient clinic and the hospitalization units, at the patient's bedside, while ensuring clinical conditions were met and privacy was maintained through the use of screens between beds.

Data was gathered through semi-structured interviews and field notes. The interviews, averaging 30 minutes in length, were conducted individually or with a family member and/or companion present, from January to June 2023. A team comprised of a nurse

and two undergraduate students from the Nursing and Medicine programs carried out data collection.

To explore the experience of symptoms (component 1 of the SMT), incorporating the concepts of symptom perception and evaluation, participants were asked: "Tell us about your experience with the symptoms related to your heart problem that trouble you." A pilot test with three individuals with HF was completed before data collection commenced, revealing no need for adjustments to the interview script. The interview process began only after the research had been explained, participants had agreed to participate, and the Free and Informed Consent Form had been signed. At the interview's conclusion, each participant had the option to listen to their interview recording for validation or to propose modifications. To facilitate data recording, interviews were recorded, transcribed, and then analyzed. Sociodemographic and clinical data were collated in Microsoft Excel spreadsheets.

For data analysis, Creswell's Content Analysis technique was employed. This involved preparing and organizing the data; transcribing interviews and typing up field notes; reviewing the organized data; coding the data and categorizing it into thematic areas; presenting and describing the data and categories; and finally, interpreting the data.[15] The coding and categorization process involved organizing the material into pre-established text segments to assign meaning. Subsequently, data pertaining to each theme were compiled, resulting in two categories.

The categories were established based on two concepts central to the experience of symptoms: perception and evaluation. The category linked to perception focused on the symptoms described by participants, whereas the category related to evaluation gathered data on judgments concerning the limitations in daily activities caused by the symptoms and their origins.

The ethical standards for research involving human subjects were strictly observed. The Human Research Ethics Committee of the Federal University of Paraná approved the study, under opinion number 5.738.913 and CAAE number 62956422.1.0000.0102, in November 2022. To ensure participants' anonymity and confidentiality, an identification code was utilized: 'P' (participant); 'F' or 'M' (female or male); and 'X' (a number in Arabic numerals in ascending order of participants as per the data collection) - for example, PF13.

RESULTS

A total of 26 individuals participated in the study, with an average age of 65. The participants were evenly distributed between men and women. The majority of the participants identified themselves as brown or black (n= 14; 53.8%), with a self-reported average family income of BRL 3,220.00. Most of them earned up to two minimum wages (n= 14; 66.7%) and had not completed primary education (n= 17; 65.4%) (Table 1).

Most participants were hospitalized (n= 21; 80.1%). Notably, FC III (n= 21; 80.8%) and HF with reduced ejection fraction (n= 15; 60.0) were prominent. The average number of associated comorbidities was 3.34± 1.46, with systemic arterial hypertension being the most common (n= 21; 80.8%) (Table 1).

From the data obtained during the interview and derived from the concepts that encompass the experience of symptoms, two thematic categories emerged: "Perception of Heart Failure Symptoms" and "Evaluation of Heart Failure Symptoms."

Perception of heart failure symptoms

This category encompasses the symptoms perceived by the participant that affect their daily life, primarily related to intensity and/or distress. The perception of one or more symptoms associated with HF was identified. The symptoms perceived were physical in nature and included dyspnea (shortness of breath), fatigue (tiredness), weakness, pain (in the chest), dizziness, lower limb edema, racing heart, and abdominal distension. Dyspnea and fatigue were the symptoms most frequently and intensely reported by the participants. They were perceived in all situations of daily life, whether at rest or with minimal effort:

> *When I go downstairs to take a shower, wash my feet, or pick something up from the floor, I feel tired and dizzy; my eyes darken, and I experience suffocation in my chest and neck. I am consistently short of breath, nearly every day. This shortness of breath occurs both when I walk and when I am stationary, leaving me fatigued*. (PF13)

> *The dizziness experienced after sitting for an extended period and then standing is akin to a shock; without something to hold onto, I would fall. This occurs daily. My legs feel swollen, although I am unsure if this is a side effect of my medication. Abdominal bloating is also a concern* [...]. (PM11)

> *Chest pain, described as a sharp pain in a specific area, leads to shortness of breath or weakness when I apply pressure; the pain is severe. I experience significant tiredness, breathlessness, and swelling in my abdomen and legs. Over the last 15 days, I have encountered dizziness I had not previously experienced: regardless of whether I am sitting, lying down, or standing, dizziness ensues. If I am standing, I must quickly find support to prevent myself from falling. Even when standing still, I feel exhausted, and sometimes my heart races or slows unexpectedly* [...]. (P125)

> *My heart races, and I experience chest pain. I feel bloated; my stomach becomes hard, causing pain.* (PF13)

Upon inquiry about heart problems, participants mentioned symptoms not directly associated with HF, such as musculoskeletal pain and soft tissue lesions on the lower limbs.

> The heart symptoms that concern me include the sores on my leg and breathlessness. (PF5)

> My back condition is a significant source of discomfort. (PM10)

> *I suffer from arthritis in my knee, which hampers my ability to stand and walk. I also have a back* issue. (PF11)

Table 1. Sociodemographic and clinical characteristics of the 26 participants in the study.

Variables	n (%)	Mean ± SD	Median	Range
Sex				
Male	13 (50.0)			
Female	13 (50.0)			
Age		65.46 ± 13.68	66.5	34-92
Self-declared color or race				
White	12 (46.2)			
Brown	9 (34.6)			
Black	5 (19.2)			
Marital status				
Married	12 (46.2)			
Widowed	8 (30.8)			
Single	3 (11.5)			
Separated/divorced	2 (7.7)			
Common-law marriage	1 (3.8)			
Religion				
Catholic	18 (69.3)			
Evangelical	6 (23.1)			
No religion	2 (7.7)			
Education				
Incomplete primary education	17 (65.4)			
High school incomplete	3 (11.5)			
Completed high school	3 (11.5)			
No education	3 (1.5)			
Average family income*		3,220.00 ± 2,315.50	2,640.00	1,320.00–12,000.00
From 1 to 2 minimum wages	14 (66.7)			
From 1 to 4 minimum wages	6 (28.6)			
From 4 minimum wages	1 (4.7)			
HF functional class (NYHA)				
Class III	21 (80.8)			
Class IV	5 (19.2)			
LVEF (%) (n = 25)**		42% ± 0.15	37.00	20-70
HFrEF	15 (60.0)			
HFpEF	8 (32.0)			
HFmrEF	1 (4.0)			
HFimpEF	1 (4.0)			
Etiology of HF				
Ischemic cardiomyopathy	6 (23.1)			
Dilated cardiomyopathy	4 (15.4)			
Hypertensive cardiomyopathy	3 (7.7)			
Etiology to be clarified	8 (30.7)			
No information	6 (23.1)			
Comorbidities				
Hypertension	21 (80.8)			
Diabetes mellitus	12 (46.1)			
Obesity	11 (42.3)			
Smoking or drinking				
Smoking	13 (50.0)			
Alcoholism	7 (26.9)			
Medications for continuous use		8.69 ± 3.99	8	4–21

*Monthly amount according to the national minimum wage in May 2023, of BRL 1,320.00 (one thousand, three hundred and twenty reais). The n for this variable was 21, as five participants were unable to state their average family income. **LVEF: left ventricular ejection fraction; HFrEF: heart failure with reduced ejection fraction; HFpEF: heart failure with preserved ejection fraction; HFmrEF: heart hailure with mildly reduced ejection fraction; HFimpEF: heart hailure with improved ejection fraction. Source: survey data (2023).

When asked about symptoms, participants did not directly express psychological, social, or emotional symptoms related to HF. However, during the interviews, they shared experiences of fear and anxiety. Emotional disorganization can trigger or exacerbate symptoms such as dyspnea, and fear of dying becomes evident, as some cardiological symptoms overlap with emotional disturbances.

> *But that's anxiety, I think it's fear of what I went through, because I had a heart attack around Christmas. I was flown to hospital the next day by helicopter. I think that gave me this fear of shortness of breath and dying. It's in my psyche, I'm going to depend on medication to get better. If I don't have medication, when I open the bathroom door I have to wait for the air to come out of the bathroom before I can go in, because if I go in quickly I get short of breath.* [...] *that's when I got a trauma, a thermal shock from the cold with the heat, and it caused the shortness of breath.* (PM2)

Additionally, the participants' facial expressions revealed visible sorrow, discouragement, and sadness. Conversations before and after the interviews unveiled feelings of discouragement, melancholy, and hopelessness, attributable to both the limitations imposed by HF and the adjustments to a new routine, as well as situations detached from the illness. The domain of symptom perception encompasses the Person, illustrating how emotional factors, such as fear, can influence the perception of symptoms. Moreover, the Health and Illness domain was acknowledged when participants recognized symptoms related to HF and other health conditions, which also induced distress.

Assessment of heart failure symptoms

This category includes participants' assessment of their symptoms, either sequentially or simultaneously with the perception of symptoms, and their impact on daily life. Impacts considered extend to work, domestic activities, body hygiene, personal care, and social relationships.

The origin of each symptom was assessed, meaning participants attempted to identify its cause and consider any diseases that could justify it. During this process, the pandemic significantly influenced the recognition and perception of symptoms. Some participants were confused, associating dyspnea not with HF but with COVID-19 infection.

> *The shortness of breath got worse when I went to shower and when I went to sleep.* [...] *It started at the time of COVID. We took care of ourselves, wore masks, and when I saw the shortness of breath, it started. I didn't go for a consultation because it was right at that time when people with COVID were isolated. So said he wasn't going to say anything about it, but I think I had COVID. After a while I thought it wasn't, so I thought it was a lung problem, because I smoked, so I stopped smoking* [...]. (PM6)

In some reports, participants believed that HF caused symptoms only in the heart, equating the issue to 'heart pain' or 'chest pain.' This perception that HF symptoms are restricted to the heart can lead to a misinterpretation of their origin and make it difficult to attribute them correctly to HF, suggesting that the disease's manifestations might be caused by other conditions.

> *I don't know, the doctors say it's the heart, but it* [the heart] *doesn't bother.* (PF3)
>
> *My legs feel swollen, they say it's the heart, we thought it was the blood circulation, but it's the heart.* (PM13)

Comorbidities or other health conditions complicate the assessment of symptoms, which are common among participants, especially those with hypertension, diabetes, obesity, dyslipidemia, and chronic kidney disease. In some instances, a symptom may be caused or exacerbated by another condition.

These comorbidities and their related symptoms demonstrate the influence of Domain 3 (Health and Illness) of the SMT, impacted by the presence of comorbidities and health conditions.

> *The heart symptoms that bother me are chest pain. I also have back pain and joint pain. If my diabetes increases a little, so does the pain. The insomnia came after the heart problem, because before I slept well. If I get up and sit down, I feel dizzy.* (PM5)
>
> *Because of the diabetes, when it goes down it bothers me a lot, I don't know if it's the pressure that's high or low, if it's the diabetes that's gone too low or if it's the dizziness. I don't eat well, but I don't know if it's because of the dialysis or if it's all of this together.* (PF12)

Information about the disease and its symptoms primarily came from health professionals, especially doctors. There were instances where participants were unaware that certain manifestations could be attributed to HF until informed by a health professional.

> [...] *it's just this tiredness, the doctor has already explained to me that my heart isn't circulating normally as it should, so that's why water gathers in my lungs and I get short of breath, my eyes get dark, it's hard to walk.* (PF3)
>
> *The doctors say it's the heart, but I don't know if it is, I don't understand.* (PF9)

Difficulty in performing day-to-day activities due to symptoms was expressed through words such as "difficult," "I can't," "I couldn't," and "I sleep poorly." This ranged from more complex tasks requiring physical effort to elementary and essential tasks such as making the bed, dressing, bathing, or sleeping.

> *I'm a mechanic, my job is manual labor, and when I lift a car I can't bend down. I can't remove a wheel from a car*

> *or loosen a bolt, which for me is essential. I don't have any strength* [...] *I can't, it's heart failure and it's hurting me a lot, because it's taken away my freedom, I can't go out with my son.* (PM7)
>
> *I took a shower the other day and had to stop in the middle to sit on the chair and rest, and then finish.* (PM13)
>
> *I couldn't go out, I couldn't walk in the yard or do anything, because I got tired, I couldn't make the bed because I got tired.* (PF6)
>
> *I sat on the bed to put on my panties and clothes, and I couldn't lift my feet to get dressed, I had to ask my daughters for help, I couldn't even get dressed.* [...] *I realized it because there's a little shop near my house and I usually shop there. I used to walk quietly, it was downhill, I'd get there and do what I needed to do. But lately, I'd walk for a while and have to stop and rest, I'd get short of breath and my legs would get tired.* (PF8)
>
> *If I turn over I get tired, coughing gets tired, eating gets tired, lying down alone gets tired. I'm so tired I can't stand it. I put my plate of food down to eat and I get tired, it's hard. I get tired walking uphill.* (PF4)

Participants noted that physical symptoms adversely affect social relationships, leading to emotional and psychological issues like discouragement, hopelessness, and sadness. These reflect the impact of Domain 1 (Person) and are further influenced by Domain 2 (Environment), as symptoms hinder the ability to engage in work and domestic activities.

DISCUSSION

The experience of symptoms in participants with HF was elucidated through the concepts that encapsulate the perception and evaluation of symptoms. Perception involved identifying the primary symptoms associated with HF, such as dyspnea, fatigue, chest pain, dizziness, lower limb edema, tachycardia, and abdominal distension, as well as symptoms linked to other health conditions and comorbidities, including musculoskeletal issues. The evaluation of symptoms delved into their impact on activities of daily living, the challenges in performing work-related tasks, household chores, and maintaining personal hygiene, and their effects on participation in social and family relationships. These activities, once integral to the routine, became limited or impossible due to the symptoms, engendering feelings of regret, sadness, and hopelessness due to the restrictive condition imposed by HF III and IV.

The sociodemographic and clinical characteristics align with those of other Brazilian studies,[16-18] featuring samples with a mean age between 62 and 68 years. The gender distribution was balanced, corroborating the findings of a study that also demonstrated this equilibrium[16] and diverging from other research indicating a predominance of either females[18] or males.[19-21]

Evidence underpins the clinical conditions of this study, with a reduced ejection fraction[17] and FC III as prevalent.[20] FC III is consistent with findings from a university hospital in São Paulo, Brazil,[20] yet differs in terms of etiology, which underscored valvular heart disease.[20] The comorbidities also align with other national and international studies, emphasizing systemic arterial hypertension, diabetes, dyslipidemia,[16,22] chronic kidney disease,[22] and other conditions such as smoking.[16,22]

Few studies have explored SMT in cardiovascular patients, specifically in those with HF, especially within Brazil. However, a study conducted in Southeast Asia, investigating SMT in the context of experience and symptom management strategies, discovered that dyspnea or shortness of breath was the most prevalent symptom, while fatigue or a lack of energy was noted for being more frequent and distressing.[12]

Dyspnea emerged as the most common symptom,[7,13,23] followed by chest discomfort[7] or fatigue or lack of energy,[23] coinciding with the present study, which highlighted the distress related to symptoms of dyspnea, weakness, fatigue, and chest symptoms such as pain.

The three most common symptoms - non-cardiac pain, dyspnea, and fatigue - were more burdensome in participants with depression.[24] This study acknowledges that the absence of psychological and emotional symptom manifestations does not imply that the individual does not experience them, but rather that they may not perceive these as symptoms related to HF, possibly underestimating their significance.

The attribution of symptoms to other pathologies, identified in this study, was also listed in the scoping review aimed at examining the perception and evaluation of HF symptoms. It was revealed that identifying symptoms posed a challenge due to the myriad of comorbidities present in patients, leading to the erroneous attribution of symptoms to other pathologies or to factors such as age, stress, medication, and comorbidities, without associating them with the cardiac issue.[25] Consequently, older individuals face greater challenges in differentiating symptoms related to HF from those associated with the normal aging process.[26]

In this study, participants had difficulty discerning the relationship between symptoms and HF, attributing them to various causes such as infection due to COVID-19, diabetes, kidney disease, hemodialysis, anemia, among others. This finding echo evidence from a Colombian study of women with acute coronary syndrome, where the majority of participants attributed symptoms to non-cardiac causes.[27]

Regarding the COVID-19 pandemic, a study conducted in China found that people were reluctant to access health services due to fear of contamination.[28] In the present study, a delay in seeking medical attention was reported because individuals believed that their HF symptoms were related to COVID-19. This reflects a potential underestimation of the symptom's seriousness. Therefore, the pandemic has impacted both the perception and evaluation of HF symptoms, leading to a delayed pursuit of health services.

Although this study did not explore the factors affecting symptom perception and evaluation directly, evidence suggests negative influences, including the concurrent experience of multiple symptoms,[25] as reported by participants. They were

not restricted to just one symptom. The impact of variables such as age, gender, education level, prior experience with HF, and depression on symptom perception and evaluation remains unclear.[25] Another study highlighted difficulties in recognizing symptoms as related to HF, which participants attributed to other diseases or comorbidities.

Moreover, individuals often became accustomed to the symptom, despite its restrictive and distressing nature.[29] This observation aligns with the present study's findings, where participants frequently did not spontaneously report classic symptoms but did so upon direct questioning, thereafter providing detailed descriptions of their experiences. To assess the impact of HF symptoms in terms of the limitations they impose on daily life, certain elements are crucial for this evaluation, particularly when the symptom is life-threatening or significantly impairs daily activities.[6]

In this investigation, symptoms restricted simple everyday actions, such as working, sleeping, walking, bending, and breathing. Thus, the inability to perform basic and essential activities illustrates the perceived severity of the symptom, which also exacerbates feelings of anxiety, fear of death, sadness, and others. This study revealed that difficulty in performing basic tasks was due to dyspnea, fatigue, and dizziness, corroborating a study on SMT[29] that identified significant distress from the inability to conduct ordinary activities due to dyspnea, exhaustion, difficulty breathing, and foot edema.

As a response to symptom evaluation, patients often self-limit and isolate to manage or mitigate symptoms, driven by fears of disease progression or death.[26] Limiting oneself from activities such as walking, household chores, or others requiring effort also influences symptom perception and evaluation. By avoiding situations causing discomfort, participants believed they would not perceive the symptom. Fear of losing independence and uncertainty about disease progression motivate some HF patients to downplay their symptoms and limitations.[26]

The study's findings related to nursing domains outlined by the SMT showed an impact on the Person domain, where individual emotional and psychological conditions influenced symptom perception and assessment. The Environment domain was affected by reduced work and social/family interactions, whereas the Health and Illness domain's impact stemmed from comorbidities enhancing HF symptoms. This research elucidates the context of HF symptoms, and employing SMT aids in understanding symptom experiences. This may enhance the assertiveness of future interventions and professional practices in developing strategies with patients and families.

The study's limitation, due to its inductive methodology and focus on a specific population with class III and IV HF linked to a particular health institution, restricts the generalizability of its findings to other heart failure categories. The results might be skewed by factors intrinsic to the participants' illness process, with their accounts representing their own experiences and perceptions, so they are valid only for the group. Future research should include participants who are in NYHA FC II and those associated with different health institutions.

CONCLUSIONS AND IMPLICATIONS FOR PRACTICE

The primary symptoms experienced by individuals with HF include: (a) regarding perception, symptoms specifically attributable to HF such as dyspnea at rest or during exertion, fatigue, weakness, dizziness, chest pain, and lower limb edema, in addition to symptoms stemming from other conditions, such as musculoskeletal pain and pain from soft tissue injuries; (b) concerning assessment, the identification of the origins of symptoms associated with HF or other comorbid conditions, including diabetes, hypertension, and COVID-19, as well as their impacts on daily life and the limitations they impose on previously routine activities, such as personal hygiene or care, household chores, sleeping, walking, or working. Both categories of symptoms elicit emotional responses and can exacerbate feelings of sadness, hopelessness, and social isolation.

Furthermore, the domains of Person, Environment, and Health and Illness are impacted due to intrinsic emotional and psychological factors, working conditions, and aspects related to the illness and health conditions of the participants, respectively.

For the advancement of nursing practice and science, this study provides a foundation for planning care for patients at various stages, whether in health promotion or recovery, contributing to a more effective disease and symptom experience and promoting greater patient involvement in their own care. This knowledge is pivotal in enhancing nurses' autonomy by offering a robust framework for systematized care grounded in scientific evidence.

Studies such as this are crucial for the progression of nursing practice and science in Brazil. Given the scarcity of Brazilian studies exploring SMT in the context of HF, this research is notable for its originality and potential to contribute to the development of this nursing theory in the country.

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DATA AVAILABILITY RESEARCH

The contents underlying the research text are included in the article.

CONFLICT OF INTEREST

No conflict of interest.

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