

Association of social and clinical conditions to the quality of life of patients with heart failure



Associação das condições sociais e clínicas à qualidade de vida de pacientes com insuficiência cardíaca

Asociación de condiciones social y clínicas para calidad de vida del paciente con insuficiencia cardiaca

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ABSTRACT

Objective: To analyze the association between sociodemographic and clinical conditions with the quality of life related to health of heart failure patients

Method: Cross-sectional study with a non-random sample of 84 outpatients with heart failure, performed in the city of João Pessoa, PB, Brazil, in the period from January to July 2015. The questionnaire by name Minnesota Living with Heart Questionnaire was used. The following tests were applied in data analysis: t-Student, ANOVA and Pearson's Correlation, with a 5% significance level.

Results: The average scores of the Minnesota Living with Heart Failure Questionnaire showed a good quality of life in the group under study. There was a significant negative association between quality of life and age: thus the lower the age, the worse the quality of life.

Conclusion: Health promotion actions become necessary to improve the coping capacity of this disease, especially for younger patients.

Keywords: Heart failure. Quality of life. Association. Health promotion.

RESUMO

Objetivo: Analisar a associação entre as condições sociodemográficas e clínicas com a qualidade de vida relacionada à saúde de pacientes com insuficiência cardíaca.

Método: Estudo transversal, com amostra não probabilística de 84 pacientes com insuficiência cardíaca, em seguimento ambulatorial, realizado no município de João Pessoa, PB, Brasil, no período de janeiro a julho de 2015. Utilizou-se o questionário *Minnesota Living with Heart Failure Questionnaire*. Na análise dos dados, foram aplicados os testes: *t-Student*, *ANOVA* e *Correlação de Pearson*, com nível de significância de 5%.

Resultados: Os escores médios do *Minnesota Living with Heart Failure Questionnaire* revelaram boa qualidade de vida do grupo pesquisado. Houve associação negativa significativa entre qualidade de vida e idade: portanto, quanto menor a idade, pior a qualidade de vida.

Conclusão: Fazem-se necessárias ações de promoção à saúde para melhorar a capacidade de enfrentamento dessa doença, em especial, para os pacientes mais jovens.

Palavras-chave: Insuficiência cardíaca. Qualidade de vida. Associação. Promoção da saúde.

RESUMEN

Objetivo: Analizar la asociación entre las condiciones sociodemográficas y clínicas con la calidad de vida relacionada con la salud de los pacientes con insuficiencia cardiaca.

Método: Estudio transversal con una muestra no probabilística de 84 pacientes ambulatorios con insuficiencia cardiaca, realizados en la ciudad de João Pessoa, PB, Brasil, de enero a julio de 2015. Se utilizó el cuestionario de Minnesota Living with Heart Failure. En el análisis de los datos, se aplicaron las pruebas: *t* de Student, *ANOVA* y *correlación de Pearson*, con un nivel de significación del 5%.

Resultados: Las puntuaciones promedio de los Minnesota Living with Heart Failure Cuestionario mostraron una buena calidad de vida del grupo estudiado. Hubo una asociación negativa significativa entre la calidad de vida y la edad: por lo tanto cuanto más joven peor es la calidad de vida.

Conclusión: son acciones de promoción de la salud necesarias para mejorar la capacidad de control de esta enfermedad, especialmente para los pacientes más jóvenes.

Palabras clave: Insuficiencia cardiaca. Calidad de vida. Asociación. Promoción de la salud.

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■ INTRODUCTION

Heart failure (HF) is a clinical syndrome characterized by physiological deterioration of the heart, which prevents it from pumping blood in quantities necessary to meet the metabolic needs of the body and tissue. It is regarded as the final common pathway of most heart diseases, one of the most important current clinical challenges⁽¹⁾.

HF is an epidemic in progress, due to the high rates of mortality and hospitalization. In addition, it causes huge economic and social costs for health services⁽²⁾. The aging population and the increased survival to the disease due to improvements in diagnosis and treatment methods, have been identified as some of the reasons for the increased prevalence of heart failure in recent decades⁽²⁾.

It is estimated that the prevalence of HF in the United States is around 5.1 million people. In Latin America, decompensated HF occupies a prominent role as the leading cause of hospitalization for cardiovascular disease, with the highest frequency being in people 65 years of age or more⁽³⁾.

In Brazil, most HF records is limited to single-center studies and the database of the Computer Science Department of the Unified Health System (DATASUS)⁽⁴⁾. In this scenario, in the two year period between 2013-2014, 460,813 hospitalizations were carried out for HF and the mortality ratio for the period was 9.76%⁽⁵⁾.

Despite major advances in its clinical management and treatment, HF is a condition that continues to defy for its physical, psychological, social and existential suffering, caused by the spread of the disease and changes in lifestyle that are necessary to improve self-care management and maintain a good quality of life^(1,3).

In health, health related to quality of life (HRQoL) has been defined as the individual's perception of the influence of the disease in their life⁽⁶⁾. Thus, HRQoL measures the perception of people living with the disease through functional capacity, occupational health, general perception of health status, and psychological and social functioning in the context in which they operate⁽⁶⁻⁷⁾.

Because it is a chronic disease, with potential unfavorable outcomes, HF has an impact on HRQoL of patients. The symptoms of the disease (dyspnea, fatigue), psychological disorders (anxiety, depression), adverse effects of medications and treatment costs lead to additional changes in daily life. Additionally, age, sex, ventricular dysfunction, functional class and severity of HF are configured as variables that can influence the perception of HRQoL⁽²⁻³⁾.

A study that aimed to identify factors that affect the HRQoL of Korean patients with HF concluded that the economic, functional status and gender affect the perception

of HRQoL⁽⁷⁾. Another survey, conducted in Serbia, pointed out that the longer the duration of the disease, the greater the emergence of depressive symptoms, leading to emotional losses and negative perceptions related to quality of life⁽⁶⁾. Therefore, conducting studies is relevant to identifying the sociodemographic and clinical conditions of patients with HF in different contexts, to establish possible associations with HRQoL.

Thus, nursing care in the care of chronic patients, especially in patients with heart failure becomes important. This because nursing is a field of knowledge in which the knowledge generated reverts to the care of people. Thus, the profession needs to direct research to deepen the theme and encourage the development of care technologies aimed at promoting health, reducing illness, adherence and quality of life.

On the national scene, the studies focus particularly in the Southeast region of Brazil⁽⁸⁻⁹⁾, with it being necessary to propose new research covering the other regions of the country. Considering the plurality of Brazilian culture, it appears that the subject was not explored in the Northeast, especially in João Pessoa – PB. The need to recognize that this issue is a public health issue is also emphasized.

Thus, this study raised the following question: what is the association between the sociodemographic and clinical conditions with the quality of life related to the health of patients with heart failure? Thus, the objective of this study is to analyze the association between sociodemographic and clinical conditions with the quality of life related to the health of heart failure patients.

■ METHOD

A cross-sectional descriptive study with a quantitative approach, held at the cardiology clinic of two public hospitals in the city of João Pessoa, PB, Brazil. The study population consisted of patients diagnosed with HF.

Inclusion criteria were patients aged ≥ 18 years, of both sexes, diagnosed with HF, in outpatient treatment during the data collection period. Patients with cancer, lung disease, cognitive impairment or those with clinical discomfort such as dyspnea and fatigue during the interview were not included.

In the period from January 12 to July 29, 2015, data collection was carried out through consecutive non-probability sampling. During this period, 91 patients with HF were treated; of these, three refused to participate in the study and four were unable to participate due to understanding and communication barriers. The final sample consisted of 84 outpatients with HF.

The following were used for sociodemographic characterization: age, gender, race, marital status and education. Functional classes of HF were identified in the clinical profile according to the criteria of the *New York Heart Association* – NYHA Class I – absence of symptoms (dyspnea) during daily activities, being the limitation to strenuous activities similar to that observed in normal individuals; Class II – symptoms triggered by everyday activities; Class III – symptoms triggered in less intense everyday activities or because of small efforts; Class IV – perceives symptoms (dyspnea) at rest⁽²⁾. Furthermore, there was a left ventricular ejection fraction (LVEF) according to records contained in an echocardiography report, personal history (comorbidities) and drug treatment.

Quality of life was assessed using the validated Brazilian version of the *Minnesota Living with Heart Failure Questionnaire* (MLHFQ), consisting of 21 questions with a Likert scale ranging from 0 (without limitation) to 5 (maximum limitation). The score is obtained by the quantification of 21 items. The MLHFQ encompasses two dimensions: a physical dimension, which is the sum of questions 1 to 7, 12 and 13, and an emotional dimension, referring to questions 17 to 21. The other questions (8, 9, 10, 11, 14, 15 and 16) are related to lifestyle, financial situations and side effects of medication. These, together with the previous dimensions, form the total score. Higher scores indicate worse QoL, and lower scores, better QoL⁽¹⁰⁾.

The completion of the instruments was done by the main researcher, alongside the patient and was also verified through the information provided in the records before or after medical consultation, in a reserved place, through interviews.

Data were transported to a spreadsheet of the program *Excel for Windows* and later processed and analyzed using the *IBM Statistical Package for Social Sciences* (SPSS) version 21.0. Descriptive and inferential statistical techniques were used in the statistical analysis. *Cronbach's* alpha coefficient was used for analysis reliability, considering $\alpha > 70$ as satisfactory criteria.

Continuous variables are expressed as mean and standard deviation, and categorical variables with absolute frequencies and percentages. Data normality was verified using the *Kolmogorov – Smirnov* test. The comparison of the MLHFQ mean scores between the study variables was verified using the *Student t-tests* for independent samples and *one-way ANOVA*. To assess the correlation of demographic and clinical variables with MLHFQ scores, the *Pearson* correlation test was used. A two-tailed p-value less than 0.05 was considered statistically significant.

The study was approved by the Comitê de Ética em Pesquisa do Hospital Universitário Lauro Wanderley, of the Universidade Federal da Paraíba (Opinion No. 919.725/2014), with the consent of the locations selected for the study. All participants were provided with information about the research both verbally and in writing and signed the Free and Informed Consent Form. The study complied with the research recommendations involving human subjects according to Resolution No. 466/12 of the National Health Council.

■ RESULTS

The sample consisted of 84 patients with a diagnosis of heart failure, aged between 23 and 86 years old, mean age 58.82 ± 12.78 years. Regarding the socio-demographic profile, it was found that 60.7% of participants were from the city of João Pessoa and 39.3% from other municipalities, 53.6% were women, 50.0% declared to be white and 67.8% were married or living in a common law marriage. In the sample, there was a predominance of low levels of education, 56.0% had incomplete or complete elementary school, and 20.2% of illiterates. Retirement and family income of 02 minimum wages were characteristics present (58.3% and 48.8% of the sample, respectively).

Regarding the clinical characteristics, most participants is found in functional classes I and II (44% and 36.9%, respectively), according to criteria established by the *New York Heart Association* (NYHA). The most common etiology of HF was nonischemic (72.6%). The mean left ventricle ejection fraction (LVEF) was 50 ± 14.6 , ranging from 19% to 74%. Regarding the comorbidities associated with HF, it was observed that the Systemic Blood Pressure (hypertension) was prevalent in 63.1%, followed by Diabetes Mellitus (DM) (13.1%). The drugs most commonly used by the patients and recorded on chart were diuretics (52.4%). Four patients 4.8% used pacemakers.

In the evaluation of the HRQoL by MLHFQ, the results obtained by size and total score showed good HRQoL in the sample with the following means: physical 15.68 ± 10.97 ; Emotional 7.62 ± 5.05 , total score 33.13 ± 19.66 . The internal consistency of the instrument was verified by *Cronbach's* alpha, which proved to be good for the total score ($\alpha = 0.90$) and physical dimension ($\alpha = 0.84$), and acceptable for the emotional dimension ($\alpha = 0.65$).

Table 1 shows the association of sociodemographic characteristics to the HRQoL of research participants. Regarding the measure of HRQoL, the average was higher in females, indicating a more negative perception of HRQoL in this group. There was no statistically significant difference for any variable.

Table 1 – Association of demographic characteristics with the quality of life of patients with heart failure (n = 84). João Pessoa, PB, 2015

| Variables | Physical Dimension Mean±dp* | Emotional Dimension Mean±dp* | Total Score Mean±dp* |
|---------------------------------------|--------------------------------|---------------------------------|-------------------------|
| Age group[‡] | | | |
| 20 ≤ 40 | 23.50±8.0 | 10.38±5.04 | 45.63±17.03 |
| > 40 ≤ 60 | 16.42±11.48 | 8.03±4.76 | 35.12±19.42 |
| > 60 | 13.63±10.56 | 6.79±5.16 | 29.28±19.49 |
| P value | 0.056 | 0.153 | 0.072 |
| Gender[‡] | | | |
| Male | 14.36±10.91 | 6.79±5.12 | 30.67±19.85 |
| Female | 16.80±11.07 | 8.33±4.93 | 35.27±19.46 |
| P value | 0.313 | 0.165 | 0.288 |
| Race[‡] | | | |
| White | 16.10±11.20 | 7.71±5.54 | 33.71±21.35 |
| Black | 17.23±12.49 | 6.86±4.32 | 35.05±20.93 |
| Brown | 13.11±8.87 | 8.37±4.94 | 29.84±14.66 |
| Indigenous | 12 | 6 | 29 |
| P value | 0.656 | 0.801 | 0.849 |
| Marital status[‡] | | | |
| Married/Common law marriage | 16.39±11.32 | 8.14±5.38 | 34.75±20.65 |
| Single | 15.88±12.54 | 6.75±4.30 | 32.13±22.43 |
| Widower | 11.27±9.34 | 5.93±3.97 | 25.87±15.53 |
| Separated/Divorced | 21.50±5.26 | 8.25±5.12 | 39.25±8.18 |
| P value | 0.580 | 0.683 | 0.728 |
| Education[‡] | | | |
| Illiterate | 15.17±10.67 | 7.89±4.12 | 33.22±17.46 |
| Incomplete/Complete Elementary School | 15.30±11.04 | 7.11±5.46 | 31.30±20.25 |
| Incomplete/Complete High School | 18.08±12.18 | 9.69±4.47 | 40.62±21.20 |
| Incomplete/Complete Higher Education | 14.83±11.17 | 6.33±5.00 | 31±18.52 |
| P value | 0.604 | 0.053 | 0.396 |
| Employment status[‡] | | | |
| Employed | 18.76±11.21 | 9.65±5.56 | 39.82±20.88 |
| Retired | 14.16±10.57 | 6.82±4.73 | 29.71±17.76 |
| Disability insurance | 21.40±12.30 | 9.80±4.60 | 46.60±23.50 |
| Homemaker | 15.08±11.61 | 7.15±5.25 | 32.08±21.42 |
| P value | 0.305 | 0.170 | 0.118 |
| Family income[‡] | | | |
| 01 minimum wage | 14.36±10.75 | 6.28±4.33 | 30.36±18.24 |
| 02 minimum wages | 17.00±10.58 | 8.54±5.36 | 35.63±20.00 |
| 03 minimum wages | 13.60±13.71 | 7.40±5.60 | 29.50±23.10 |
| > 03 minimum wages | 15.50±11.58 | 7.38±4.65 | 33.50±19.69 |
| P value | 0.734 | 0.375 | 0.689 |

Source: Data Research, 2015.

Minimum wage in 2015, R\$ 778.00 reais.

* sd = standard deviation; [‡]Student t-test for independent samples; [†]ANOVA one-way.

Table 2 shows the association of the clinical features with the measure of HRQoL. It was observed that patients with hypertension had higher scores, demonstrating the negative perception of changes in the group's HRQoL, being the association with the emotional dimension statistically significant ($p < 0.001$). There was also significance for the variable pacemaker ($p < 0.001$).

Pearson's correlation test was used to assess the relationship between sociodemographic and clinical variables and the HRQoL of study participants. The analysis identified a significant negative correlation between age and MLHFQ scores for the physical dimension ($r = -0.378$; $p = < 0.001$), emotional dimension ($r = -0.277$; $p = 0.011$) and the total score ($r = -0.368$, $p = 0.01$), showing that, as age

Table 2 – Association of clinical features with the quality of life related to health of heart failure patients (n = 84). João Pessoa, PB, 2015

| Variables | Physical Dimension Mean±dp* | Emotional Dimension Mean±dp* | Total Score Mean±dp* |
|--|--------------------------------|---------------------------------|-------------------------|
| Etiology[†] | | | |
| Ischemic | 13.86±1.30 | 7.22±4.95 | 30.06±20.04 |
| Nonischemic | 17.02±10.68 | 7.92±5.15 | 35.44±19.27 |
| P value | 0.413 | 0.868 | 0.948 |
| Functional class (NYHA)^{§¶} | | | |
| I | 15.89±12.24 | 8.19±5.792 | 34.35±22.94 |
| II | 13.10±10.28 | 6.97±4.90 | 29.48±18.02 |
| III | 20.12±7.94 | 7.56±3.30 | 37.38±13.25 |
| P value | 0.218 | 0.088 | 0.070 |
| Presence of comorbidities[†] | | | |
| Arterial Hypertension | 16.98±11.65 | 7.98±5.26 | 36.09±20.74 |
| Diabetes Mellitus | 13.73±10.60 | 7.73±5.21 | 28.55±17.94 |
| Obesity | 14.20±9.09 | 6.80±4.38 | 27±11.35 |
| Arrhythmias | 11.50±4.20 | 4.50±2.64 | 23.50±9.95 |
| Dyslipidemias | 11.71±12.07 | 5.71±4.82 | 26.00±21.11 |
| Nephropathies | 12.33±5.85 | 7.67±1.52 | 26.00±6.55 |
| Rheumatic disease | 29 | 17 | 67 |
| P value | 0.644 | <0.001** | 0.308 |
| Medications[†] | | | |
| Diuretics | 17.82±10.99 | 8.02±4.54 | 36.09±19.28 |
| Beta blockers | 12.36±7.86 | 6±4.6 | 27.36±14.32 |
| ACE or ARB [¶] inhibitors | 14.65±12.4 | 8.57±5.99 | 33.26±22.81 |
| Vasodilators | 4.50±4.95 | 2.50±2.12 | 11.50±10.60 |
| Digitalis | 13 | 1 | 24 |
| P value | 0.623 | 0.177 | 0.308 |
| Pacemaker[†] | | | |
| Yes | 9.25±4.34 | 2.25±0.95 | 20.50±3.87 |
| No | 15.99±11.14 | 7.89±5.02 | 33.76±19.92 |
| P value | 0.041** | <0.001** | <0.001** |

Source: Research data, 2015.
 *sd = standard deviation; [†]Student t-test for independent samples; [‡]ANOVA one-way; [§]NYHA: New York Heart Association; ^{||}ACE inhibitors: Angiotensin enzyme converter inhibitor; [¶]ARB: angiotensin II receptor blocker; ** Statistically significant difference

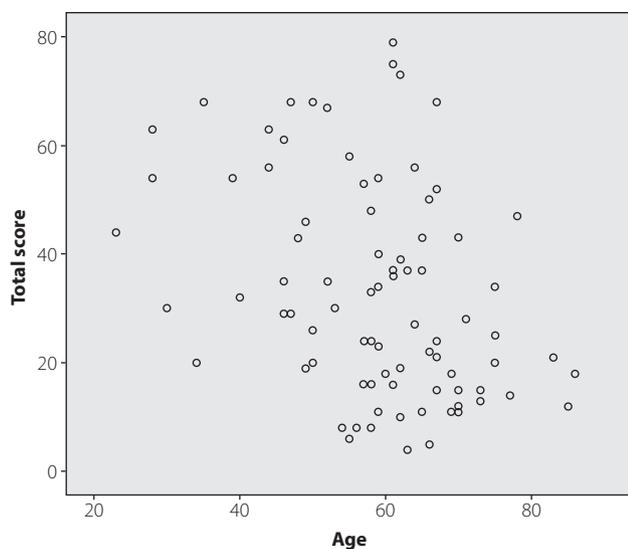


Figure 1 – Correlation between age and quality of life related to the health of heart failure patients (n = 84). João Pessoa, PB, Brazil, 2015

Source: Research data, 2015.

progresses, MLHFQ scores decrease, and consequently, the HRQoL increases (Figure 1).

■ DISCUSSION

In recent decades, the prevalence and incidence of heart failure have increased more significantly and, despite advances in clinical management, hospitalization, readmission and mortality rates remain high⁽¹¹⁾. Analyzing sociodemographic and medical conditions and their association with the HRQoL of patients with heart failure is of paramount importance, since HRQoL has been an indicator used to guide care practices and assist in the definition of public policies in the context of health promotion and disease prevention.

The study revealed a profile of patients with balanced distribution by sex, that were predominantly Caucasian, married or in a common-law marriage, with low levels of education and income, with comorbidities associated with HF and decreased LVEF.

Regarding the socio-demographic variables, one can observe higher HRQoL scores for females. There is not enough evidence in the literature to differentiate the sexes in HF. However, evidence suggests that females are more susceptible to psychological factors, especially depressive symptoms that affect HRQoL, given the clinical and epidemiological differences, age, as well as a lower coping action, to accept or adhere to treatment⁽¹²⁻¹³⁾.

In the analysis of the mean HRQoL according to marital status, there was a higher average for those who separated/divorced *versus* married or in a common-law marriage. These results are consistent with the literature, which indicates married patients as having a better emotional state before the support in coping with the disease, reducing symptoms of anxiety and depression. Patients who live alone are predisposed to social isolation and reduced adherence to the complex treatment of HF⁽¹³⁾. Thus, these results indicate the need for interventions that promote coping of patients who live alone, looking for connections in the family structure or support groups that can support these people, thus contributing to an improved self-care management.

Regarding education, the results are like national surveys conducted in patients with HF⁽⁸⁻⁹⁾. However, in the context of North American countries⁽¹⁴⁻¹⁵⁾, some studies show an average education of about 12 years, which is due to better access and quality of education offered in most developed countries. The substantial number of retirees in this study is also noteworthy, possibly determined by impaired health conditions, among which may be HF and/or the associated comorbidities, aspects that may have influenced early retirement, when considering that the average age of those surveyed was situated below the minimum age for social security in the country.

There was a correlation between the MLHFQ scores and age ($p = 0.01$), verifying that with advancing age, the perception and confronting of the disease improved, that is, the older patients may have lower expectations regarding their HRQoL and therefore, reported lower scores than younger patients, indicating a good HRQoL.

As observed in this study, a recent study conducted in Canada, with 94 patients followed in a multidisciplinary clinic, concluded that advanced age was aggregated to better confidence to face HF. In addition, age was the key to better management of self-care actions, contributing to a better perception of HRQoL⁽¹⁵⁾.

Although it is not possible to identify causal relationships in a cross-sectional study, it is worth considering that younger patients suffer more from the impact of the disease, due to changes imposed on their lifestyle and the restrictions necessary for proper management. Therefore, these results indicate that patients with HF, especially those who are younger, should be encouraged to identify barriers and coping solutions to deal with the disease to minimize the implications for quality of life, enhancing positive individual aspects that contribute to their condition.

For the clinical variables, it was observed that the presence of hypertension influenced a major change

in the perception of HRQoL, although in general the respondents have experienced good HRQoL. Being Systemic Blood Pressure a chronic disease, it is possible that patients have difficulties in adhering to the proposed treatment in the face of lack of knowledge of the disease and the need to adopt new lifestyle habits, such as regular physical activity, dietary restrictions (low sodium, fat and simple carbohydrates intake), stop smoking and alcohol consumption⁽¹⁶⁾, thus reflecting the emotional dimension, in which the results were statistically significant ($p < 0.001$). In this respect, health education strategies are essential to promote knowledge and identify potential barriers to treatment adherence.

In this study, patients who had pacemakers showed good HRQoL; thus, the pacemaker positively influenced the HRQoL of the carriers, even with the limitations imposed by HF. It is assumed that the use of pacemakers provides a sense of security in patients and the possibility of a longer life expectancy, since the device's purpose is to control cardiac activity and prevent sudden death⁽¹⁷⁾. With this, there is an increase in the perception of HRQoL. However, it is important to emphasize that the statistically meaningful results in all dimensions evaluated cannot be generalized because the number of patients using pacemakers is greatly reduced. It is suggested that further studies be promoted with larger sample sizes using pacemakers, outlining other clinical characteristics relevant to the grievance, comparing the findings with patients who do not make use of the device, in addition to the evaluation of the effect of the device in HRQoL of patients with HF before and after implantation of the device in the indicated cases.

The analysis of MLHFQ variables showed a low average for the total score, which shows little influence of HF on HRQoL among the evaluated participants. The physical dimension scores that assess symptoms such as dyspnea, fatigue and edema were higher when compared to the emotional dimension. It is seen that physical aspects contribute to the increase in the mean total score of HRQoL, indicating greater limitations for patients when considering these aspects. Still, the total score and scores per dimension reveal the little influence of the disease in the negative perception of HRQoL among the patients evaluated. It should be noted that most of the participants were diagnosed with HF in functional classes I and II of the NYHA, which are characterized by the absence of symptoms or mild to moderate symptoms from strain, which may have influenced the good perception of HRQoL.

Dyspnea, fatigue and edema of the lower limbs have been identified as the leading cause of hospitalization for patients with HF⁽¹⁸⁾. Thus, the study findings corroborate

the literature, considering that patients with HF have serious limitations with the progressive advance of the disease, contributing to the reduction in life expectancy and worsening of HRQoL, due to the reduction in cardiac output responsible for inadequate tissue perfusion, which reduces the autonomy and independence to perform everyday activities^(6-7,14), features that are missing in the group studied.

The results obtained were like those found in the study in Southeast Brazil, with 130 outpatients, in which an average HRQoL of 34.9 ± 24.8 was found and the physical dimension was the most affected⁽⁸⁾. So, although in regions with peculiar socio-cultural specificities, the HRQoL of patients with heart failure was similar, since the perception of HRQoL is influenced by symptoms instituted by the disease, as well as the ability to perform everyday activities.

The data also showed that *Cronbach's* alpha obtained for the total score of the MLHFQ (0.90) indicated the instrument's reliability, showing it could be trusted to evaluate the HRQoL of patients with HF. Equivalent results were found in a study of 170 elderly outpatients with HF⁽⁹⁾.

Despite not being under investigation, during the development of the research it was found that the participants were not accompanied by a multidisciplinary team, which indicates weakness in the assistance provided to this population, despite the HRQoL measure results proving to be satisfactory. Evidence has shown that interventions by multidisciplinary teams (doctors, nurses, nutritionists, social workers and psychologists) in the monitoring of patients with HF reflect in the decrease in the number of hospital readmissions, mortality, greater adherence to treatment proposal and better HRQoL⁽¹⁹⁻²⁰⁾. This fact raises the need to implement monitoring programs with a multidisciplinary focus on the care provided to patients with HF, to support and ensure the proper planning of care with a holistic approach, as well as promote a self-care capacity in the management of the disease.

Thus, nurses, as members of the multidisciplinary team, play a fundamental role in the educational process and in developing the care plan for patients HF. Monitoring strategies in specialized clinics, home visits and telephone monitoring focused on the following themes: weight control, salt intake restriction, the correct use of medications, regular physical activity and recognition of symptoms that reflect the worsening of the disease, are recommended for patient education and guidance^(3,19). These measures aim to reduce and minimize possible complications in functional capacity as well as in fostering health promotion, treatment adherence and quality of life of this population.

■ CONCLUSION

The findings of the study have identified the association of sociodemographic and clinical conditions with the HRQoL of patients with HF, revealing age as a variable that is significantly associated to the perception of HRQoL. Therefore, younger patients have a worse perception of HRQoL than those with advanced age, i.e. over 60 years. Thus, for the practice of nursing, this study opens new perspectives for the assessment of HRQoL in patients with HF, especially the younger ones, for the development of nursing interventions that can promote and improve the coping capacity before the disease by this population.

In addition, it is considered necessary to propose cohort studies to deepen the sociodemographic and clinical profile of these patients in different regions of the country. It also emphasizes the importance of implementing multidisciplinary monitoring programs for health services, aimed at specialized care in cardiology, with a view to promoting holistic care and clinical management of HF.

As a limitation of this study is its cross-sectional design, which prevents evaluation of the behavior of the variables over time and the inference of causal relationships between them. Furthermore, due to the sample size, the data from this study cannot be generalized. Thus, further research should be conducted with cross cut and larger samples to verify the assumptions made in this study.

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