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RESEARCH

Influence of socio-demographic characteristics in the self-care of people with heart failure

Influência de características sociodemográficas no autocuidado de pessoas com insuficiência cardíaca

Influencia de las características sociodemográficas en el autocuidado de personas con insuficiencia cardiaca

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ABSTRACT

Objective: To determine the influence of socio-demographic characteristics in the self-care of people with heart failure (HF). **Method:** Cross-sectional, analytical study, held in three private hospitals in Fortaleza, Ceará, Brasil, with 57 hospitalized patients. The data were collected through a demographic characterization form and a self-care assessment scale and were analyzed with inferential statistics, using mean comparison tests. **Results:** Self-care was best assessed in people with higher education level, higher household income and in a relationship. **Conclusion:** The socio-demographic characteristics influenced seven self-care practices: dietary control; monitoring of body weight; effort in labor activities; knowledge about HF; up-to-date vaccination record; leisure activities; and family and social support network with strong bonds. The higher prevalence of answers indicating satisfactory self-care practices among the patients occurred in the areas of health promotion and tolerance to stress.
Descriptors: Nursing; Self-Care; Heart Failure; Health Promotion; Cardiovascular Abnormalities.

RESUMO

Objetivo: Averiguar a influência de características sociodemográficas no autocuidado de pessoas com insuficiência cardíaca (IC). **Método:** Estudo transversal, analítico, realizado em três hospitais privados de Fortaleza, Ceará, Brasil, com 57 pacientes internados. Os dados foram coletados por meio de formulário de caracterização sociodemográfica e de escala de avaliação do autocuidado e foram analisados com estatística inferencial, utilizando-se testes de comparação de médias. **Resultados:** O autocuidado foi melhor avaliado em pessoas com maior escolaridade, renda familiar mais alta e companheiro. **Conclusão:** As características sociodemográficas influenciaram sete práticas de autocuidado: controle dietético; monitoramento do peso corporal; esforço na atividade laboral; conhecimento sobre a IC; esquema vacinal atualizado; atividades de lazer; e rede de suporte familiar e social com vínculos fortes. A maior prevalência de respostas indicativas de práticas de autocuidado satisfatórias entre os pacientes ocorreu nos domínios de promoção da saúde e tolerância ao estresse.
Descritores: Enfermagem; Autocuidado; Insuficiência Cardíaca; Promoção da Saúde; Anormalidades Cardiovasculares.

RESUMEN

Objetivo: Averiguar la influencia de las características sociodemográficas en el autocuidado de personas con insuficiencia cardíaca (IC). **Método:** Estudio transversal, analítico, realizado en tres hospitales privados de Fortaleza, Ceará, Brasil, con 57 pacientes internados. Los datos fueron recolectados por medio de formulario de caracterización sociodemográfica y de escala de evaluación del autocuidado y fueron analizados con estadística inferencial, utilizando pruebas de comparación de promedios. **Resultados:** El autocuidado fue mejor evaluado en personas con mayor escolaridad, renta familiar más alta y con pareja. **Conclusión:** Las características sociodemográficas influenciaron siete prácticas de autocuidado: el control dietético; el monitoreo del peso corporal;

el esfuerzo en la actividad laboral; el conocimiento sobre la IC; el esquema de vacunación actualizado; las actividades de ocio; y la red de apoyo familiar y social con vínculos fuertes. La mayor prevalencia de respuestas indicativas de las prácticas de autocuidado satisfactorias entre los pacientes ocurrió en los ámbitos de la promoción de la salud y de la tolerancia al estrés.
Descriptores: Enfermería; Autocuidado; Insuficiencia Cardíaca; Promoción de la Salud; Anomalías Cardiovasculares.

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INTRODUCTION

Among the cardiovascular diseases, heart failure (HF) stands out for the high cost of its treatment. Its morbidity is associated with unfavorable prognosis in over 40% of the cases[1]. The growing prevalence of HF, with estimated 5 million cases in Brazil in 2015, is mainly due to the increase in life expectancy, seeing as the disease has a direct relation with age and with the most common comorbidities in the aging process[2]. Many clinical conditions are associated with increased propensity for HF, and among them, the most recent publication of the American College of Cardiology outlines four risk factors: hypertension, diabetes mellitus, metabolic syndrome and atherosclerosis[3].

Considering the chronic nature of HF and the need of changing habits for the patients to maintain a good quality of life after receiving the diagnosis, some rehabilitation programs have been developed with the purpose of reestablishing their usual daily and labor activities. These programs are based on the encouraging of self-care to avoid complications associated with the loss of control over the disease.

In this study, the definition adopted considers self-care as a person's ability to care for him/herself, performing activities for his/her own benefit, to maintain his/her life, health and well-being. This ability is enhanced throughout life, being essential for the development of any self-care activity, especially when there is a health problem[4].

Because of its positive impact on health, it is important to evaluate self-care to determine the necessary interventions and analyze their results. An approach focused on the self-management of care for individuals with HF can help them gain more confidence to identify and find solutions to barriers to self-care[5].

Using this approach, nurses may become able to understand the complexity of individuals with decompensated HF and develop actions to encourage education for self-care[6]. The programs of nursing care for patients with HF can reduce the frequency of hospitalizations and improve the patients' adherence to treatment and also their quality of life[7].

Some studies assessed the relationship between sociodemographic characteristics and self-care in different clinical conditions from those addressed in this study. These studies verified the association between sociodemographic variables and self-care of patients with spinal cord injury[8] and diabetes mellitus type 2[9]. The study that correlates self-care with associated factors in patients with HF used the Self-Care of Heart Failure Index v 6.2 instrument[10].

In some rehabilitation programs and studies on the subject, self-care is evaluated by two instruments: the Self-Care of Heart Failure Index[11] and the European Heart Failure Self-Care Behavior Scale[12]. Both instruments are self-applicable scales, which facilitates application but hinders interpretation, due to the high degree of subjectivity resulted from the varying degrees of education level and cognition of the people evaluated[13]. This study, therefore, differs from the others by using an instrument focused on health professionals. This instrument aims at the objective evaluation of the self-care of patients with a HF diagnosis, associating the practices evaluated with the characteristics of each patient. It is believed that some conditions, such as education level, family support and financial conditions can influence the practice of self-care and its manifestations.

OBJECTIVE

To determine the influence of socio-demographic characteristics in the self-care practices of people with HF.

METHOD

Ethical aspects

This study, approved by the Research Ethics Committee of the Federal University of Ceará through its submission to Plataforma Brasil, follows the guidelines and standards of research involving human beings of Resolution No. 466/2012[14]. Data collection was initiated only after the signing of the Informed Consent Form, to register the subjects' agreement to participate.

Study design and location

This was an analytical, cross-sectional study, conducted in three private hospitals with cardiac care, in Fortaleza, Ceará. One of the hospitals specializes in the treatment of cardiovascular diseases; the others offer general health care services, featuring cardiac care as one of their specialties.

Population, sample, inclusion and exclusion criteria

All patients with a medical diagnosis of HF, over 18 years old and of both sexes, hospitalized in the three institutions during the period established for data collection, were invited to participate in the research (sequential non-probability sampling). Thus, sample calculation was not performed. Patients without psychological and cognitive conditions to answer directly to the questions formulated by the researchers were excluded, as were patients who underwent heart transplant, given the possibility of this clinical condition interfering in the practice of self-care of patients with HF. The sample consisted of 57 patients.

Study protocol

The data were collected between March and September of 2013, in the wards of the institutions. The instrument used was a

form with questions structured in three parts: sociodemographic characterization, clinical characterization and evaluation of self-care. The third part of the instrument consisted in the Scale of Evaluation of the Self-care of Patients with Heart Failure (EAAPIC)[13], which contains 20 items for assessment of self-care divided into five areas: (1) *nutrition* (4 items): dietary control, salt intake, water intake, monitoring of body weight; (2) *activity and rest* (3 items): regular exercise, labor activity, sexual activity; (3) *perception and cognition* (3 items): knowledge about HF, acceptance and adaptation to HF, monitoring and recognition of symptoms of decompensation of HF; (4) *health promotion* (6 items): follow-up with health professionals, abstention from smoking, abstention from alcohol, personal hygiene, up-to-date vaccination record, regular use of prescribed medication; (5) *stress tolerance* (4 items): stress management, leisure activities, seeking help when symptoms of decompensation appear, family and social support network. Each item has five answer options, 1 corresponding to the worst and 5 to the best possible answers[13].

Analysis of results and statistics

The data were organized and tabulated in Microsoft Office Excel® 2010 spreadsheets, according to the variables created based on socio-demographic characteristics (sex, age, marital status, education and family income of the participant) and those related to self-care (EAAPIC's items)[13]. For data analysis, we used the program IBM SPSS Statistics® 20.

The socio-demographic characteristics were analyzed through descriptive statistics, with calculation of absolute and relative frequencies of the categorical variables and measures of central tendency (mean and median) and dispersion (standard deviation and interquartile range – IQR). To facilitate the analysis of self-care, the answers of EAAPIC's items were dichotomized: 1, 2 or 3 were classified as "unsatisfactory self-care" and 4 or 5 as "satisfactory self-care." The dichotomization of the answers was based on the understanding that scores 4 and 5 represent better self-care when compared to the others. Student's t-test was applied for independent samples and the Mann-Whitney U test was applied to compare the averages of each item of evaluation of self-care according to the sociodemographic characteristics. All quantitative variables were tested regarding the normality of distribution (Kolmogorov-Smirnov). Results with p-values lower than 0.05 were considered as statistically significant.

RESULTS

Of the 57 patients included in the study, 33 (57.9%) were men, 30 (52.6%) were married and 32 (57.1%) had more than eight years of education. Their ages ranged from 43 to 95 years old; 46 (80.7%) of the patients were older adults. The median family income of the participants corresponded to 4.4 minimum wages (IQ = 6.0).

Time of medical diagnosis of HF greater than 5 years predominated (42.1%), ranging from 1 to 27 years, with the average being 7.8 years; in addition, 38.6% of the patients were overweight. The symptoms that led to the initial request for medical assistance (47.3%) were dyspnea, physical exhaustion (42.1%), chest pain (26.3%) and dizziness (10.5%). The most prevalent symptoms at the moment of or during hospitalization were: physical exhaustion (66.6%), dyspnea (63.1%), tachycardia (12.3%), dizziness (10.5%) and chest pain (8.8%).

The comorbidities observed were: systemic arterial hypertension (66.6%), diabetes mellitus (45.6%) and valvular heart diseases (17.5%), even though 22.8% of the patients denied having comorbidities.

In the evaluation of the patients' self-care, answers indicating satisfactory practices predominated in two domains of the scale (health promotion and stress tolerance.) Among them, the domain with the best result was health promotion, because the proportion of answers equivalent to satisfactory self-care was higher in all items. Also in this domain, the item with the highest frequency of satisfactory self-care answers was abstention from alcohol (96.5%) (Table 1).

Table 1 – Distribution of frequency of answers to the items of the Scale of Evaluation of Self-care of Patients with Heart Failure, by patients hospitalized in the three institutions studied (N = 57), Fortaleza, Ceará, Brazil, 2013

Domains/Items	Self-care			
	Unsatisfactory		Satisfactory	
	f	%	f	%
Nutrition				
Dietary control	41	71.9	16	28.1
Salt intake (restriction)	7	13.2	50	86.8
Water intake (restriction)	5	31.3	52	68.8
Monitoring of body weight	55	96.5	2	3.5
Activity and rest				
Regular exercise	51	89.5	6	10.5
Labor activity	4	7.0	53	93.0
Sexual activity	11	19.3	46	80.7
Perception and cognition				
Knowledge about HF	39	68.4	18	31.6
Acceptance and adaptation to HF	30	52.6	27	47.4
Monitoring and recognition of decompensation of HF	8	14.0	49	86.0

To be continued

Table 1 (concluded)

Domains/Items	Self-care			
	Unsatisfactory		Satisfactory	
	f	%	f	%
Health promotion				
Follow-up with healthcare professionals	13	22.8	44	77.2
Abstention from smoking	3	5.3	54	94.7
Abstention from alcohol	2	3.5	55	96.5
Personal hygiene	16	28.1	41	71.9
Up-to-date vaccination record	20	35.1	37	64.9
Regular use of prescribed medication	10	17.5	47	82.5
Tolerance to stress				
Stress management	31	54.4	26	45.6
Leisure activities	28	49.1	29	50.9
Seeks help when symptoms of decompensation appear	12	21.1	45	78.9
Family and social support network	10	17.5	47	82.5

Observation: HF: Heart failure.

In the "nutrition" domain, there was a higher frequency of patients who reported salt (86.8%) and water restriction (68.8%). In "activity and rest", a smaller percentage of patients practiced physical exercise regularly (10.5%). In relation to "perception and cognition", the participants who monitored and recognized the symptoms of decompensation of HF predominated (86%) (Table 1).

In the association between the means of the self-care assessment items and the sociodemographic characteristics, women showed better dietary control (p = 0.023). In contrast, men had greater knowledge about HF (p = 0.021) (Table 2).

Older adults were associated with the maintenance of healthy nutrition (p = 0.010) and better management of labor activities (p = 0.019). The age group corresponding to adults was associated with the frequent monitoring of body weight (p < 0.0001) and with more knowledge about the diagnosed heart disease (p = 0.046) (Table 2).

A higher education level was associated with better following the recommendations about leisure activities (p = 0.016). A higher monthly household income was associated with greater knowledge about aspects related to HF (p = 0.016) and with the pursuit of leisure activities according to the case history and/or to the recommendations of health professionals (p = 0.011), when compared to people whose family income was up to six minimum wages (Table 2).

As for marital status, statistically significant association was found between living with a partner and greater knowledge about HF (p = 0.049), following the vaccination schedule (p = 0.039) and family and social support network with moderate/strong bonds (p = 0.006) (Table 2).

Table 2 – Association between the means of the answers to the items of the Scale of Evaluation of Self-care of Patients with Heart Failure and the socio-demographic characteristics of patients hospitalized in the three institutions studied (N = 57), Fortaleza, Ceará, Brazil, 2013

Domains/Items	Sex		Age group		Education level		Household income		Marital status	
	Female	Male	< 60 years old	≥ 60 years old	≤ 8 years old	> 8 years old	1-6 MW	≥ 7 MW	IR	NR
	Mean (SD)	Mean (SD)	Mean (SD)	Mean (SD)	Mean (SD)	Mean (SD)	Mean (SD)	Mean (SD)	Mean (SD)	Mean (SD)
Nutrition										
Dietary control	3.1(1.1)	2.4(1.0)	1.9(1.0)	2.9(1.0)	2.9(0.8)	2.5(1.2)	2.9(1.1)	2.6(1.2)	2.7(1.1)	2.8(1.1)
p-value*	0.023		0.010		0.100		0.413		0.794	
Salt consumption	4.4(1.4)	4.4(1.3)	3.8(1.9)	4.6(1.2)	4.8(0.8)	4.3(1.5)	4.7(1.0)	4.3(1.5)	4.4(1.4)	4.5(1.3)
p-value**	0.939		0.085		0.152		0.713		0.808	
Water intake	4.2(1.7)	3.5(2.0)	3.4(2.1)	3.9(1.8)	5.0(0.0)	3.5(1.9)	4.0(2.0)	3.4(2.1)	4.5(1.3)	2.7(2.1)
p-value**	0.661		0.743		0.667		0.730		0.142	
Weight monitoring	1.1(0.4)	1.2(0.8)	1.8(1.5)	1.0(0.0)	1.1(0.8)	1.1(0.6)	1.0(0.0)	1.0(0.0)	1.3(0.9)	1.0(0.0)
p-value**	0.723		0.000		0.766		1.000		0.094	
Activity and rest										
Regular exercise	1.3(0.9)	1.4(1.1)	1.5(1.2)	1.4(0.9)	1.4(1.0)	1.3(1.0)	1.3(0.8)	1.4(1.1)	1.3(0.9)	1.5(1.1)
p-value**	0.738		0.639		0.693		0.820		0.382	

To be continued

Table 2 (concluded)

Domains/Items	Sex		Age group		Education level		Household income		Marital status	
	Female	Male	< 60 years old	≥ 60 years old	≤ 8 years old	> 8 years old	1-6 MW	≥ 7 MW	IR	NR
	Mean (SD)	Mean (SD)	Mean (SD)	Mean (SD)	Mean (SD)	Mean (SD)	Mean (SD)	Mean (SD)	Mean (SD)	Mean (SD)
Labor activity	4.9(0.2)	4.4(1.3)	4.1(1.6)	4.8(0.8)	4.8(0.8)	4.5(1.1)	4.8(0.7)	4.3(1.4)	4.6(1.0)	4.7(1.1)
p-value**	0.063		0.019		0.072		0.424		0.213	
Sexual activity	3.7(0.9)	3.5(0.8)	4.0(0.8)	3.2(0.7)	3.5(1.2)	3.6(0.7)	3.5(1.0)	3.2(0.5)	3.6(0.7)	3.2(1.2)
p-value*	0.739		0.065		0.750		0.673		0.390	
Perception and cognition										
Knowledge about HF	2.7(0.8)	3.3(1.0)	3.5(0.8)	2.9(0.9)	2.8(0.8)	3.2(1.0)	2.8(0.8)	3.6(0.9)	3.3(0.9)	2.8(1.0)
p-value**	0.021		0.046		0.129		0.016		0.049	
Acceptance and adaptation	3.3(0.9)	3.3(1.1)	3.1(1.2)	3.4(1.0)	3.6(0.7)	3.0(1.1)	3.3(1.0)	3.4(1.1)	3.5(1.1)	3.1(0.9)
p-value**	0.973		0.514		0.056		0.754		0.128	
Recognition of decompensation	4.1(1.3)	4.3(0.9)	4.4(0.8)	4.2(1.1)	4.2(0.9)	4.1(1.2)	4.1(1.2)	4.3(1.1)	4.4(0.7)	4.0(1.4)
p-value**	0.768		0.538		0.784		0.669		0.627	
Health promotion										
Follow-up with healthcare professionals	4.3(1.3)	4.2(1.2)	4.0(1.1)	4.3(1.2)	4.5(0.8)	4.0(1.4)	4.4(1.1)	4.0(1.3)	4.1(1.1)	4.3(1.3)
p-value**	0.772		0.250		0.163		0.512		0.921	
Abstention from smoking	4.8(0.8)	4.8(0.9)	5.0(0.0)	4.7(0.9)	4.8(0.8)	4.7(0.9)	4.8(0.7)	4.3(1.5)	4.7(1.0)	4.8(0.8)
p-value**	0.754		0.388		0.734		0.568		0.620	
Abstention from alcohol	5.0(0.0)	4.8(0.9)	4.6(1.2)	4.9(0.6)	4.8(0.8)	4.9(0.7)	4.8(0.7)	5.0(0.2)	4.7(1.0)	5.0(0.2)
p-value**	0.616		0.240		0.511		0.588		0.090	
Personal hygiene	3.9(0.7)	3.8(0.7)	4.2(0.7)	3.8(0.7)	3.7(0.7)	3.9(0.7)	3.7(0.7)	4.1(0.6)	3.9(0.7)	3.8(0.7)
p-value**	0.929		0.152		0.447		0.135		0.499	
Up-to-date vaccination record	3.5(1.6)	3.9(1.6)	3.4(1.7)	3.9(1.6)	3.6(1.6)	3.8(1.6)	3.8(1.5)	4.0(1.7)	4.1(1.3)	3.3(1.7)
p-value**	0.199		0.354		0.576		0.475		0.039	
Prescribed medication	4.5(1.3)	4.1(1.7)	3.8(1.9)	4.4(1.5)	4.3(1.5)	4.2(1.6)	4.4(1.4)	4.0(1.8)	4.2(1.6)	4.4(1.4)
p-value**	0.341		0.288		0.756		0.620		0.614	
Tolerance to stress										
Stress management	3.3(0.9)	3.3(1.2)	3.1(1.3)	3.3(1.0)	3.4(1.1)	3.2(1.0)	3.1(1.1)	3.6(1.1)	3.3(1.1)	3.2(1.0)
p-value**	0.993		0.461		0.413		0.159		0.809	
Leisure activities	3.0(1.3)	3.4(1.5)	3.7(1.4)	3.1(1.4)	2.7(1.3)	3.6(1.3)	2.8(1.2)	4.1(1.4)	3.4(1.3)	3.0(1.4)
p-value*	0.283		0.284		0.016		0.011		0.289	
Seeks help	4.3(0.9)	4.4(0.8)	4.4(1.0)	4.4(0.8)	4.5(0.8)	4.3(0.9)	4.3(0.9)	4.6(0.6)	4.4(0.8)	4.4(0.9)
p-value**	0.992		0.645		0.513		0.527		0.794	
Support network	4.0(0.9)	4.2(0.9)	4.4(0.7)	4.1(0.9)	4.1(0.9)	4.1(0.8)	4.1(0.9)	4.2(1.0)	4.4(0.8)	3.8(0.8)
p-value**	0.276		0.280		0.943		0.690		0.006	

*Note: * Student's t-test (for independent samples); ** Mann-Whitney Test (for the mean of each item); EAAPIC: Scale of Evaluation of Self-Care of Patients with Heart Failure; HF: heart failure; SD: standard deviation; IR: in a relationship; NR: not in a relationship; MW: minimum wage in 2013 (R$ 678.00).*

DISCUSSION

As noted, most self-care practices included in the scale were considered satisfactory, demonstrating that the population studied had good adherence to self-care related to HF. Among the satisfactory practices, those that had higher percentage of adherence included: salt restriction, labor activity, sexual activity, monitoring and recognition of the signs and symptoms of decompensation, abstention from smoking, abstention from alcohol, regular use of prescribed medication and family and social support network.

The health professionals who follow-up patients with HF should, in every visit, investigate the symptoms that occur during everyday activities. The anamnesis must question specifically what activities cause discomfort and limited functional capacity, such as climbing up ramps or flights of stairs, walking on an even surface, carrying out domestic activities, dressing, bathing, eating and sleeping without restriction of decubitus[15].

Salt-water overload is often referred to as a cause of decompensation of HF. Although there are no well-defined studies demonstrating that salt and water restriction are effective

strategies to reduce morbidity, there is a general consensus that the patient's adherence to salt-water restriction measures improves the quality of the care received. Patients with HF should be also encouraged to suppress the practice of passive and active smoking, because smoking increases the risk of total cardiovascular disease and lung infection[15].

Salt restriction is the self-care practice most often indicated in the articles analyzed, followed by daily weighing, water restriction, monitoring and recognition of symptoms, exercise and drug therapy. However, one must consider the subjectivity of salt restriction, which can be understood not as the complete suppression of salt consumption, but in relation to the prior consumption, which varies according to food habits and culture[1].

Some self-care practices were considered unsatisfactory, namely: dietary control, monitoring of body weight, regular exercise, knowledge about HF, acceptance and adaptation to HF and stress management. Monitoring of body weight and regular exercise had a higher percentage of patients with poor adherence.

A low level of physical activity may be related to intolerance to activity and the exacerbation of symptoms when making effort, common in patients with HF, in addition to the scarcity of programs for the promotion of physical activity for patients with HF[10]. Similarly, the lack of cultural habits of physical exercise as a resource for the promotion of health may be an impediment.

At each visit, body weight must be monitored, because this is a simple measure that can assist in the assessment of the volume and nutritional status of patients with chronic HF. When it occurs in short intervals of time (days or a few weeks), weight variation may indicate worsening of the volume state. In a study with patients with HF, it was found that only 28% had been instructed in relation to weight control, while 89% reported having no problem to weigh-in daily[16].

The continuous clinical follow-up of patients with HF is recommended in the recent guidelines on the clinical management of HF, and the patient's successful performance of self-care is one of the main strategies of the health care plan[3], emphasizing its importance to the maintenance of healthier conditions. Thus, the nursing interventions that aim to adequately meet the needs of the patient require careful planning (including an accurate assessment of these needs), with the choice of the best approach and a thorough assessment of its effectiveness in the optimization of self-care practices, translated into clinical results[17].

Meta-analyses of a non-pharmacological approach, implemented by professionals inserted in HF management programs, bring beneficial results for the knowledge of treatment, self-care and adherence, as well as improve quality of life and reduce costs[18].

Dietary control had significant difference when associated with sex and age group, as did monitoring of body weight and labor activity when associated with age. The higher values for labor activity associated with patients aged ≥ 60 years old can be explained by the fact that individuals of this age group are usually retired, not requiring physical strain to exercise their labor activities. The association between the monitoring of body weight and adult age may be related to the better physical and cognitive abilities of adults to weigh-in daily.

Increasing functional capacity to maintain the ability to work has been the goal of all randomized studies. For workers with physical labor activities, the change of function should be evaluated individually and periodically, after optimization of the pharmacological and non-pharmacological treatments. The specificity of the context of each patient must be taken into account in decision-making processes[15] and in the development of educational interventions for the practice of self-care.

Knowledge about HF had statistical association with the variables sex, age, household income and marital status. Higher values were obtained for male adults with greater family income and in a relationship. Income influences access to information which in turn helps the individual to obtain knowledge about the disease and treatment, and adult patients are generally more apt to acquire and retain knowledge.

Identifying the patient's knowledge level is the first step for the process of teaching-learning of self-care to be effective. This evaluation is required to determine what patients know about their illness and which actions they should take to manage it[19]. Studies indicate that the risk factors of hospitalization and readmission of patients with HF include the lack of knowledge about signs and symptoms of decompensation of the disease and the low adherence to self-care recommendations[20-21].

One study showed that the lower the patients' self-care score, the greater the number of hospitalizations due to acute decompensated HF. In addition, younger patients and those with more years of education obtained higher self-care scores[22].

Leisure activities had statistical association with education and family income, suggesting the possibility of a higher education level and, especially, a greater family income influencing the access to leisure activities. Therefore, it is important that low-cost leisure activities are offered to patients, who are often not aware of activities offered in the community itself.

Participants in a relationship were better evaluated regarding the variables family and social support network and up-to-date vaccination record. A partner or spouse usually represents a bond of family support, and strong bonds can act as support for adherence to self-care actions. Participants in a relationship had better adherence to 11 self-care practices. In this way, the development of educational self-care interventions should be extended also to the family, not focusing on the patient only.

The answers indicating unsatisfactory self-care may be related to the fact that the sample was comprised of patients, which allows inferring that the participants' hospitalization is due to the decompensation caused by shortcomings in self-care.

Study limitations

It is suggested that similar researches that evaluate self-care in people with HF are conducted with samples paired by sex and age group, to confirm the results found. This could not be done in this research due to the reduced number of participants. As this is a cross-sectional study, the ability to infer causality was limited, restricting the results described here to the understanding of the impact of socio-demographic characteristics on the self-care of the group studied.

Contributions to the nursing field, health or public policy

Stimulating self-care is an important health promotion action, especially when considering the context of chronic illness. Even so, many health promotion actions are implemented without considering the specifics of the target audience, taking into account socio-demographic data and the cultural and family context.

Knowing the characteristics of the patients being followed-up in the health care services subsidizes more accurate nursing diagnoses and enables the preparation of a care plan tailored to each individual's potentialities and difficulties. The implementation of an elaborate care plan contributes to a more effective nursing care. The nursing care provided to patients with heart failure, when subsidized by the nursing process, contributes to a qualified assistance and can represent gains in self-care practices, leading to the improvement of their condition and to the reduction of new hospitalizations.

CONCLUSION

There was higher prevalence of answers indicating satisfactory self-care practices among the patients, especially in relation to the areas of health promotion and tolerance to stress.

The socio-demographic characteristics influenced seven self-care practices: dietary control; monitoring of body weight; effort in labor activities; knowledge about HF; up-to-date vaccination record; leisure activities; and family and social support network with moderate/strong bonds.

The associations found between sex, age, education, household income and marital status and self-care practices indicate the possibility of follow-up and construction of a care plan based on the characteristics and sociocultural and family context of each patient, which increases the chances of adherence and improves their quality of life.

REFERENCES

1. Oliveira SKP, Lima FET, Pessoa VLMP, Caetano JA, Meneses LST, Mendonça LBA. Práticas de autocuidado de pacientes com insuficiência cardíaca. Rev Ciênc Med[Internet]. 2013[cited 2016 Jun 01];22(1):23-30. Available from: http://periodicos.puc-campinas.edu.br/seer/index.php/cienciasmedicas/article/view/1998/1756
2. Silva PGMB, Ribeiro DJ, Fernandes VA, Rinaldi DVS, Ramos DL, Okada MY, et al. Impacto inicial de uma clínica de insuficiência cardíaca em hospital cardiológico privado. Rev Bras Cardiol[Internet]. 2014[cited 2016 Jun 01];27(2):90-96. Available from: http://www.rbconline.org.br/wp-content/uploads/Art_158_Pedro_Gabriel_Artigo_Original_RBC_272.pdf
3. Yancy CW, Jessup M, Bozkurt B, Butler J, Casey Jr DE, Drazner MH, et al. ACCF/AHA guideline for the management of heart failure: a report of the American College of Cardiology Foundation/American Heart Association Task Force on Practice Guidelines. J Am Coll Cardiol[Internet]. 2013[cited 2016 Feb 06];62(16):147-239. Available from: http://circ.ahajournals.org/content/128/16/e240
4. Orem DE. Nursing: concepts of practice. 5th ed. St. Louis: Mosby, 1995.
5. Goodman H, Firouzi A, Banya W, Lau-Walker M, Cowie MR. Illness perception, self-care behaviour and quality of life of heart failure patients: a longitudinal questionnaire survey. Int J Nurs Stud[Internet]. 2013[cited 2017 May 03];50(7):945-53. Available from: https://www.ncbi.nlm.nih.gov/pubmed/23211796
6. Ferreira VMP, Silva LN, Furuya RK, Schmidt A, Rossi LA, Dantas RAS. Autocuidado, senso de coerência e depressão em pacientes hospitalizados por insuficiência cardíaca descompensada. Rev Esc Enferm USP[Internet]. 2015[cited 2017 May 03];49(3):388-94. Available from: http://www.scielo.br/pdf/reeusp/v49n3/pt_0080-6234-reeusp-49-03-0388.pdf
7. Bdeir B, Conboy T, Mukhtar A, Omer H, Odeh R, Farah I, et al. Impact of a nurse-led heart failure program on all-cause mortality. J Cardiovasc Nurs[Internet]. 2015[cited 2017 May 03];30(2):E7-14. Available from: https://www.ncbi.nlm.nih.gov/pubmed/24496326
8. Coura AS, Enders BC, França ISX, Vieira CENK, Dantas DNA, Menezes DJC. Ability for self-care and its association with sociodemographic factors of people with spinal cord injury. Rev Esc Enferm USP[Internet]. 2013[cited 2017 Oct 05];47(5):1154-62. Available from: http://www.scielo.br/pdf/reeusp/v47n5/pt_0080-6234-reeusp-47-05-1150.pdf
9. Guerrero-Pacheco R, Galán-Cuevas S, Cappello OSA. Factores sociodemográficos y psicológicos asociados al autocuidado y la calidad de vida en adultos mexicanos con Diabetes Mellitus tipo 2. Acta Colomb Psicol[Internet]. 2017[cited 2017 Oct 05];20(2):168-77. Available from: http://www.scielo.org.co/pdf/acp/v20n2/0123-9155-acp-20-02-00168.pdf
10. Conceição AP, Santos MA, Santos B, Cruz DALM. Self-care in heart failure patients. Rev Latino-Am Enfermagem[Internet]. 2015[cited 2016 Jul 09];23(4):578-86. Available from: http://www.scielo.br/pdf/rlae/v23n4/0104-1169-rlae-23-04-00578.pdf
11. Ávila CW. Adaptação transcultural e validação da self-care of heart failure índex versão 6.2 para uso no Brasil[Dissertação][Internet]. Porto Alegre: Universidade Federal do Rio Grande do Sul; 2012[cited 2016 Jun 01]. Available from: http://www.lume.ufrgs.br/bitstream/handle/10183/55507/000858530.pdf?sequence=1
12. Rabelo ER, Feijó MK, Ávila CW, Souza EN, Jaarsma T. Cross-cultural adaptation and validation of the European Heart Failure Self-care Behavior Scale for Brazilian Portuguese. Rev Latino-Am Enfermagem[Internet]. 2012[cited 2016 Feb 06];20(5):988-96. Available from: http://www.scielo.br/pdf/rlae/v20n5/22.pdf
13. Oliveira SKP. Escala de avaliação do autocuidado de pacientes com insuficiência cardíaca: validação clínica[Tese][Internet]. Fortaleza: Universidade Federal do Ceará; 2015[cited 2016 Jan 14]. Available from: http:www.repositorio.ufc.br/bitstream/riufc/12685/1/2015_tese_skpoliveira.pdf

14. Brasil. Conselho Nacional de Saúde. Resolução nº 466, de 12 de dezembro de 2012. Brasília, DF, 2012[cited 2016 Feb 06]. Available from: http://bvsms.saude.gov.br/bvs/saudelegis/cns/2013/res0466_12_12_2012.html

15. Bocchi EA, Marcondes-Braga FG, Ayub-Ferreira SM, Rohde LE, Oliveira WA, Almeida DR, et al. Sociedade Brasileira de Cardiologia. III Diretriz Brasileira de Insuficiência Cardíaca Crônica. Arq Bras Cardiol[Internet]. 2009[cited 2016 Jan 14];93(Supl-1):1-71. Available from: http://publicacoes.cardiol.br/consenso/2009/diretriz_ic_93supl01.pdf

16. Nascimento HR, Puschel VAA. Ações de autocuidado em portadores de insuficiência cardíaca. Acta Paul Enferm[Internet]. 2013[cited 2016 Jul 09];26(6):601-7. Available from: http://www.scielo.br/pdf/ape/v26n6/en_15.pdf

17. Boisvert S, Proulx-Belhumeur A, Gonçalves N, Doré M, Francoeur J, Gallani MC. An integrative literature review on nursing interventions aimed at increasing self-care among heart failure patients. Rev Latino-Am Enfermagem[Internet]. 2015[cited 2016 Jun 15];23(4):753-68. Available from: http://www.scielo.br/pdf/rlae/v23n4/0104-1169-rlae-23-04-00753.pdf

18. Mussi CM, Ruschel K, Souza EN, Lopes ANM, Trojahn MM, Paraboni CC, et al. Home visit improves knowledge, self-care and adhesion in heart failure: randomized Clinical Trial HELEN-I. Rev Latino-Am Enfermagem[Internet]. 2013[cited 2016 Jun 15];21(Spe):20-8. Available from: http://www.scielo.br/pdf/rlae/v21nspe/04.pdf

19. Carneiro CS, Oliveira APD, Lopes JL, Bachion MM, Herdman TH, Moorhead SA, et al. Outpatient clinic for health education: contribution to self-management and self-care for people with heart failure. Int J Nurs Knowl[Internet]. 2016[cited 2016 Jun 15];27(1):49-55. Available from: https://www.ncbi.nlm.nih.gov/pubmed/25612229

20. Sahebi A, Mohammad-Aliha J, Ansari-Ramandi M, Naderi N. Investigation the Relationship Between Self-Care and Readmission in Patients With Chronic Heart Failure. Res Cardiovasc Med[Internet]. 2015[cited 2016 Jun 15];4(1):e25472. Available from: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4347722/

21. Almeida GAS, Teixeira JBA, Barichello E, Barbosa MH. Perfil de saúde de pacientes acometidos por insuficiência cardíaca. Esc Anna Nery[Internet]. 2013[cited 2016 Jul 25];17(2):328-35. Available from: http://www.scielo.br/pdf/ean/v17n2/v17n2a18.pdf

22. Linn AC, Azzolin K, Souza EN. Associação entre autocuidado e reinternação hospitalar de pacientes com insuficiência cardíaca. Rev Bras Enferm[Internet]. 2016[cited 2017 May 11];69(3):500-6. Available from: http://www.scielo.br/pdf/reben/v69n3/en_0034-7167-reben-69-03-0500.pdf