RIASE
REVISTA IBERO-AMERICANA DE SAÚDE E ENVELHECIMENTO
REVISTA IBERO-AMERICANA DE SALUD Y ENVEJECIMIENTO

MANAGEMENT OF SELF-CARE OF PATIENTS WITH HEART FAILURE: INTERVENTION NURSING - INTEGRATIVE REVIEW

Ana Mafalda Balsas - Nurse of ULSNA, EPE, Master's degree student in Medical-Surgical Nursing: The Person in Critical Situation, Master in Association 2016/2018 Évora, Portugal

Sandra Maria Silveira - Nurse of ULSNA, EPE, Master's degree student in Medical-Surgical Nursing: The Person in Critical Situation, Master in Association 2016/2018 Évora, Portugal

Sónia Azeitona Bilro - Nurse of ULSNA, EPE, Master's degree student in Medical-Surgical Nursing: The Critical Situation, Master in Association 2016/2018 Évora, Portugal

Maria Céu Marques - PhD in Psychology; Coordinator Professor of the University of Évora, Nursing School of São João de Deus, Department of Nursing, Évora, Portugal

VOL. 3 N.º 2 AUGUST 2017

ABSTRACT

Heart failure is a disease that occurs after myocardial injury and has been increasing in recent years. Clinical manifestations occur through tissue hypoperfusion and are manifested by various symptoms. These are grouped into classes according to their severity and influence the self-care of their patients.

Faced with this problem, our question arises: **What is the intervention of nurses in the management of self-care of the patient with heart failure? Method**: Integrative review, carried out through the synthesis of results obtained from recognized studies. The data sources were published and indexed to the EBSCO electronic database.

Results: Considering the inclusion and exclusion criteria, 6 articles were identified for this review. All refer to knowing signs and symptoms of patient's heart failure as a fundamental factor for the management of self-care.

Conclusions: In light of the results, we can conclude that the role of the nurse in teaching of patient is essential for the patient to recognize the signs and symptoms of aggravation of the disease and to be able to act, thus promoting self-care.

Keywords: Heart failure; self-care management; nursing.

INTRODUCTION

Heart failure (HF) occurs when the myocardium cannot pump blood and maintain cardiac output sufficient to meet the body's metabolic needs[1,2]. The HF usually occurs following a myocardial injury and it is considered the main cardiovascular disease whose incidence, prevalence and mortality rate are increasing. It constitutes a major health problem associated with a high level of morbidity and mortality[1,3].

Clinical manifestations of heart failure occur by increasing filling pressure and hypoperfusion of tissues. There may be different symptoms, such as dyspnoea, orthopnea, nocturnal paroxysmal dyspnoea, persistent cough irritative, alternating periods of apnea and hyperpnea and crepitations; cardiovascular such as angina, jugular engorgement, tachycardia, decreased systolic blood pressure and increased diastolic pressure; gastrointestinal disorders such as increased abdominal volume, pain on palpation, ascites, nausea, vomiting and anorexia; changes in the brain mental; generalized symptoms such as fatigue, decreased activity tolerance, dizziness, peripheral edema with positive godet, cold extremities and weight gain; and psychosocial factors such as anxiety[1,2,4].

According to the New York Heart Association Classification for heart failure, there are 4 classes according to the manifestation of symptoms at rest and in physical activity: class I - the patient does not have symptoms, and tolerates physical activity; class II - the patient is comfortable at rest, but normal physical activity causes symptoms; class III – the patient is comfortable at rest but less than normal physical activity causes symptoms; class IV - the patient may manifest symptoms at rest and these also appear with any physical activity[1,4,5].

Nursing interventions in patients with heart failure involve a variety of diagnoses, whose interventions aim to: optimize cardiopulmonary function; promote patient comfort; monitor the effectiveness of pharmacological treatment; ensuring adequate nutrition; provide information to the patient and family so that they are able to deal with the situation and at the same time being part of the support of the patient[6].

Optimizing cardiopulmonary function includes administration of correct therapy, monitoring of dyspnea and hypertension, administration of oxygen, and assessment of patient weight[6].

To monitor the effects of pharmacological treatment: the nurse must "...know the mechanism of action, side effects, therapeutic levels and toxic effects of diuretics and venodilators... He must monitor carefully the hemodynamic response to these agents"[6].

Nutritional intake: these patients may present with decreased appetite and nausea, and nutritional status may be impaired. According to Urden, the use of small meals in shorter intervals and diet to the taste of the patient, with reduced sodium, can be a way to minimize this reduction of appetite and to contribute to good nutritional status[6].

To promote comfort and emotional support: in these patients, physical activity may be compromised and may even be restricted if the patient is in the acute phase. Thus, the nurse should adopt measures to make the patient as comfortable as possible such as bed rest with raised bed head, placement of cushions to support the arms, hanging lower limbs and frequently position the patient in the bed in order to avoid changes in cutaneous integrity. Bed rest, inadequate nutritional intake, peripheral edema, and decreased perfusion of the skin increase the risk of altered skin integrity[6].

The education of the patient is a nursing intervention that assesses the degree of understanding that the patient and family have about the disease and from there develops a plan of teaching aimed at acquiring more and better knowledge. They are fundamental themes in the education of the patient: the pathophysiology of HF; importance of the water balance, valuing the importance of a diet low in salt, the measurement of inflow and

outflow of liquids, signs of water overload. It is also important that the patient recognize the importance of assessing daily weight, shortness of breath, physical activity and medication so that he can detect his changes early and communicate them to the health professional[6,7].

This education is fundamental for the self-care of the patient with heart failure, since knowledge about the disease, signs and symptoms, changes in daily habits to obtain a better quality of life are fundamental to promote and maintain self-care.

According to the International Council of Nurses, self-care is defined as an activity performed by one's self, which aims to understand and to treat what is necessary for the patient to stay operational and to deal with individual daily needs[8].

For Orem, self-care is defined as the practice of activities initiated and performed by people for their own benefit to maintain life and personal well-being[9]. Thus, self-care emerges as a system of action, since it has to be learned and applied deliberately and continuously in accordance with the regulatory needs of the people[9].

The self-care deficit theory states that the self-care deficit occurs when the self-care skills of the individual are insufficient to meet their needs. It is in this context that the intervention of the nurse enters, because to satisfy this deficit of self-care, the person needs nursing care. This need is associated with the subjectivity of people's maturity in relation to the limitations of action related to health or health care[9].

According to these concepts, the management of self-care in patients with heart failure is fundamental for personal well-being and improvement of the quality of life.

The importance of self-care in patients with heart failure has come to be valued. Since 1990 Barbara Riegel has started working on this topic. This author of several works in this area has elaborated an evaluation scale: "Self Care of Heart Failure Index SCHFI" to evaluate self-care of patients with heart failure. The latest version of this scale was published in 2009 Self Care of Heart Failure Index -SCHFI V 6.2 (10).

In Portugal, this scale was translated and tested in 2013. This is an essential instrument in the evaluation of very concrete parameters of the self-care of the patient with heart failure, allowing intervening in an individualized way, with a view to health gains, namely reducing re-hospitalization by leading to better quality of life"[11]. This has been called the Self-Care Scale for the Person with Heart Failure (EACPIC)[11].

With the increasing prevalence of the disease, patients have to be able to manage the disease in the best way, reducing the decompensations and consequently their suffering[11].

Since heart failure is a disease that affects the daily activity of the individual, the theme of our work is the one that aims to make an integrative review on nursing interventions in the management of the patient's self-care with heart failure, since the worsening of the disease causes changes in level of daily activity and self-care and nursing interventions can contribute to the patient's recognition of signs and symptoms of aggravation, acting in a timely manner and thus achieving a better quality of life. Thus, we aim to identify nursing interventions that contribute to the management of self-care of patients with heart failure.

METHODOLOGY

With the research method of evidence-based practice, an integrative review was carried out that would allow "...the synthesis of several studies already published, allowing the generation of new knowledge."[12]

To do this, we began by formulating the research question: **What is the intervention of nurses in the management of self-care of patients with heart failure?**

After formulating the question, some inclusion criteria were defined for the selection of studies to be analyzed:

Type of participants: Adult patients with heart failure;

Indicator: Management of self-care by the patient with heart failure;

Outcomes: Improved self-care and improved quality of life;

Design: Quantitative, qualitative and mixed studies published between 2013 and 2016 were included, and they had the full text.

The data sources were published studies and indexed to the EBSCO electronic platform.

Exclusion criteria were articles not indexed to the research database and non-free articles. We used as keywords: Heart failure; self-care management; nursing; and the boolean operator: and.

When the research was carried out with these keywords, 75 articles were included, and a selection was subsequently made. In a first phase, 36 were eliminated because they were not in full text. Of the 39 articles that were in a second phase, reading the titles was made and 25 have been eliminated by the title did not fit in our question, there was some repeated and there were also some systematic reviews. In a third phase, the abstracts were read

out and 14 were deleted 8, 2 because in the summary we verified that it was not related to the subject, 2 that were still repeated, and 1 systematic review, 1 integrative review and 2 reviews of literature.

After the last stage, we selected six articles for the preparation of this integrative review.

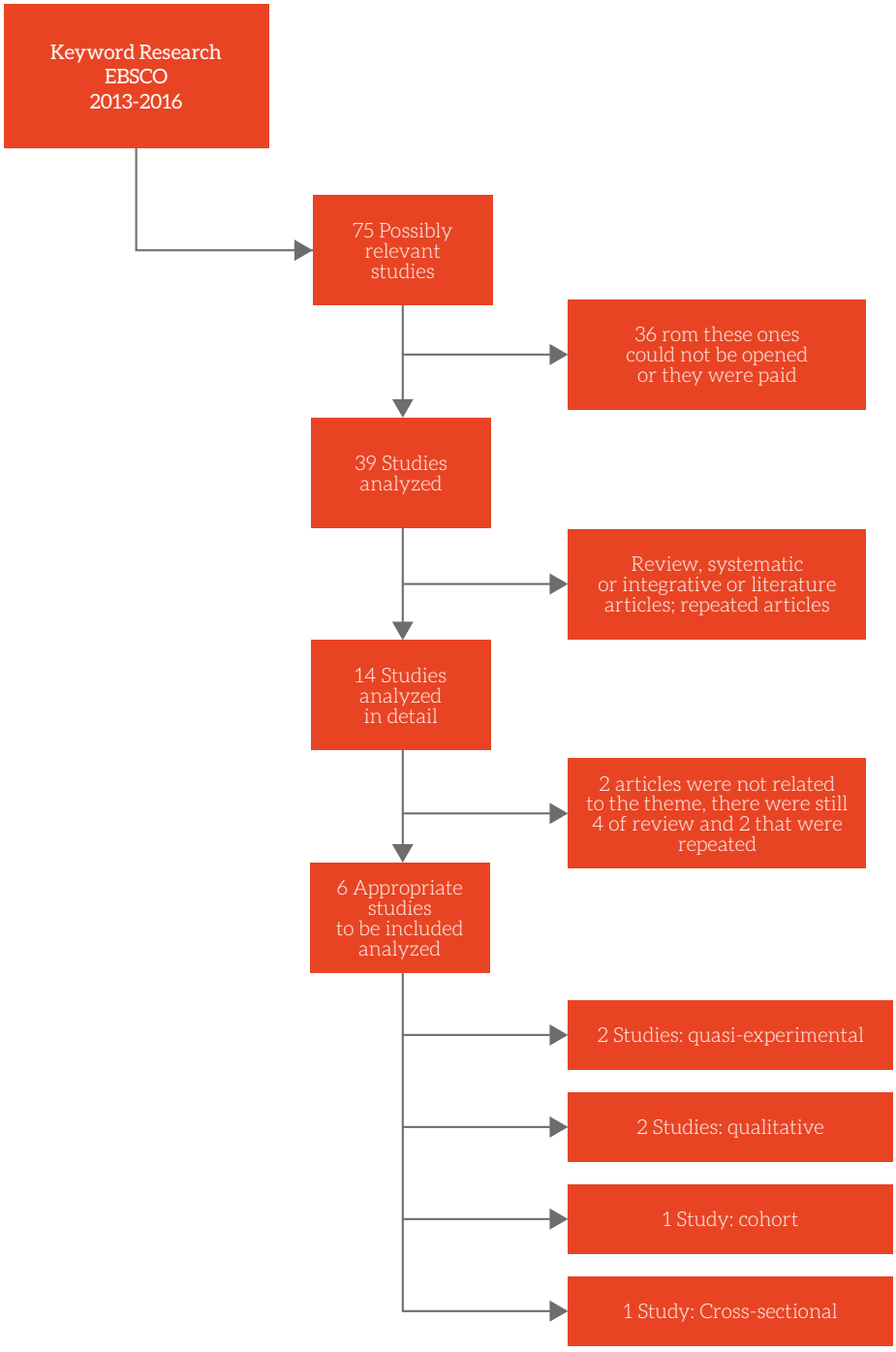

Figure 1 – Flowchart of the study selection strategy. Font in: Botelho et al.[12]

The articles were evaluated according to the grids of Joanna Briggs, 2016[13]. After this evaluation, the articles were considered to be between 72.7% and 100% agreement[14]: 2 articles with a level of evidence of effectiveness 2.c, 1 article with a level of evidence of effectiveness 3c, 1 article with level of evidence of effectiveness 4b and 2 articles with level of evidence of meaning 3[15].

Table 1 - Classification of articles included for analysis, by levels of evidence (JBI)[15] and methodological quality.

Reference	Levels of evidence (JBI)[15]	Methodological quality[14]
Heng-Hsin et al.,2013[16]	2c - quasi-experimental study	100%
Ávila et al.,2013[17]	2c - quasi-experimental study	80%
Näsström et al., 2015[18]	3 - Qualitative study	80%
Marcuccilli et al.,2013[19]	3 - Qualitative study of hermeneutic phenomenology	80%
Shaw et al., 2013[20]	3c - Cohort study	72,7%
Tsai et al., 2015[21]	4b - co-relational research – Cross-sectional	100%

Table 2 - Summary of Evidence Collected.

	Articles (authors, date, place)	Participants	Interventions	Outcomes	Design
1	Heng-Hsin el al., 2013[16] Taiwan	82 Patients with cardiac insufficiency: * 40-experimental group * 42-control group.	Control group had received usual care and their self-management skills had not been trained.	*Proven efficacy in the self-management process. * The caregiver should increase the awareness of the importance of skills of self-management and self-care capacity. Providing book with self-management interventions; Individualizing interventions and teaching improves the quality of life of the patient.	Quasi-experimental study
2	Ávila et al., 2013[17] Brasília	All the adult patients with CI who periodically did follow-up with monitoring during 6 months and with at least 1 nursing consultation N = 128 users	Experimental group provided a self-management book, teaching intervention in self-management.	Scales help the nursing team to implement individualized strategies and self-management of the patient. They allow the constant evaluation of their self-service particularly in recognition signs and symptoms of decompensation.	Quasi-experimental study
3	Näsström et al., 2015[18] Sweden	13 men and 6 women between the ages of 63 and 90 with heart failure in home care structured.	To adapt and to evaluate psychometric properties of the Brazilian version of the scale SCHFI v6.2	* Communication between patients and professionals including information exchange about reported care; * Accessibility to care; * Active involvement in care; * Relationship of trust and competence with health professionals; * Decision making.	Qualitative study
4	Marcuccilli, et al. 2013[19] USA	9 Participants who are between 31-70 years old living at home with LVAD (left ventricular assistance device) at least 3 weeks.	To evaluate how patients with Heart Failure, who receive home cared structured, describe the participation in care.	2 Main themes have been interpreted from the texts: 1 - Having LVAD means living! 2 - A wish to be normal in public.	Qualitative study of hermeneutic phenomenology

Table 2 - Summary of Evidence Collected.

	Articles (authors, date, place)	Participants	Interventions	Outcomes	Design
5	Shaw, et al., 2013[20] USA	40 Patients admitted to any care unit for treatment of cardiac insufficiency	To examine whether education and coordination of education increases self-management in patients with HF.	The intervening group had less hospitalizations and fewer visits to the emergency room associated with the heart. Improvement in self-management.	Cohorte study
6	Tsai el al., 2015[21] Taiwan	71 Inpatients with diagnosis of CI Inclusion: Having a diagnosis of CI class II or II; Conscious, Able to communicate Without fan Able to move around independently Willing to participate in the study	Importance in making self-care decision in patients with cardiac insufficiency.	The knowledge of the CI and the frequency of admission determinants of self-confidence. 3 Self-care variables. Management, trust and maintenance of self-care. Strategies relevant to clinical practice: pre-discharge education, success case consultation, group sharing: increases self-care and decision making	Co-relational research – Cross-sectional

DISCUSSION OF RESULTS

After elaborating this integrative review, we found that there was a wide range of literature that referred to the education of the patient with heart failure as a fundamental nursing intervention in the provision of care[6]. The patient with heart failure undergoes changes in their self-care and, in order to improve their quality of life, it is essential for these patients to be aware of their disease to recognize the signs and symptoms of aggravation[6,7]. Only with this knowledge they manage a proper management of self-care[20]. It is also based on this knowledge that re-hospitalization and the use of urgency due to decompensation are avoided[11,20].

After reading the articles it was verified that all of them were based on the patient's knowledge of the disease and how he used this knowledge in the management of self-care. Studies show that the greater the degree of awareness of patients about their disease, the better their management is, the more easily signs of disease worsening are identified so as to be able to take steps to minimize such aggravation and to reduce hospitalizations[16,20]. Knowledge, maintenance and management of self-care are variables that influence the management of self-care and also influence decision making[21]. For Näsström, accessibility to self-care, active participation of patients in care and decision making, and the relationship of trust and competence established with health professionals is greater in patients with structured home support[18].

The intervention of the nurse is fundamental in this process, since one of the autonomous functions of the nurse is teaching the patient and this is part of the multidisciplinary team that follows up[16,17,18]. The nurses are one of the elements available to clarify doubts, to transmit information, enabling the patient and family to manage their self-care and accompany this patient, whether this is a face-to-face or telephone follow-up[18].

In order for the nurse to understand the patient's level of knowledge and to develop a set of actions to increase this self-knowledge, the SCHFI V6.2 scale[10] was created, translated and tested to the Portuguese population, adopting the name Self-Care Scale for the Person with Heart Failure (EACPIC)[11]. The Brazilian version of the SCHFI V6.2 scale allows the nursing team to implement individualized strategies for patient self-management. It also allows the constant assessment of self-care and the recognition of signs and symptoms of decompensation[17].

The left ventricular assist device is considered by the HF patients to restore normality and to modify the self-concept based on the patients' willingness to live[19].

CONCLUSION

The studies analyzed throughout this integrative review highlight the importance of the self-knowledge of patients with heart failure in self-management and self-care management, thus facilitating the early recognition of signs and symptoms of worsening of the disease. With this recognition, the measures adopted aim to aggravate the symptoms and to avoid going to the hospital so many times and many hospitalizations.

The intervention of the nurse is fundamental, as this is one of the elements that can be part of the follow-up team and that provides information to the patient and accompanies him in this process.

However in everyday practice will all nurses recognize this importance? Is it possible, with the lack of nurses we attend daily, to carry out these teachings and these face-to-face or telephone follow-ups?

Is this need recognized at governmental and institutional levels?

There are already some Portuguese hospitals to apply the scale and to develop work in this area, however, besides the intervention with the patients, it is the mission of the nurses to make evident this need with the boards of administration of the institutions to develop strategies to meet this need and to provide a better quality of life for patients and families with heart failure.

REFERENCES

1. Monahan FD, Sands JK, Neighhbors M, Marek JF, Green CJ. Phipps Enfermagem médico-cirúrgica: Perspetivas de Saúde e Doença. 8.ª Ed. Loures (PT): Lusodidacta; 2010.

2. American Heart Association (US). Warning Signs of Heart Failure [Internet]. Condictions. Dallas, Texas (US); 2017 [cited 15 Jun 2017]. Available in: http://www.heart.org/HEARTORG/Conditions/HeartFailure/WarningSignsforHeartFailure/gns-of-Heart-Failure_UCM_002045_Article.jsp#.WhWba0pl9QL.

3. Marques MC, Rebola E, Lopes M, Pequito T. Escala de Autocuidado para a Pessoa com Insuficiência Cardíaca. In: XIX Jornadas de Cardiologia de Santarém. Santarém, Portugal: O Serviço de Cardiologia do Hospital de Santarém; Associação Cardiológica do Ribatejo; 2013.

4. Heart Failure Society of America. Stages of Heart Failure. 2015. Available in: http://www.hfsa.org/stages-of-heart-failure.

5. New York Heart Association - Nyha Classification - The Stages of Heart Failure; 2012.

6. Urden LD, Stacy KM, Lough ME. Enfermagem de Cuidados Intensivos, Diagnóstico e Intervenção. 5.ª Ed. Loures (PT): Lusodidacta; 2008.

7. Ordem dos Enfermeiros. Classificação Internacional para a Prática de Enfermagem. Internacional Council of Nurses (ICN) - versão 2.0. Lisboa (PT): OE. 011.

8. Heart Failure Society of América. Living with Heart Failure; 2015.

9. Tomey AM, Alligood MR. Teóricas de Enfermagem e a sua obra. 5º eEd. Loures (PT): Lusociência;

10. Riegel B, Lee CS, Dickson VV, Carlson B. An update on the self-care of heart failure index. J Cardiovasc Nurs [Internet]. 2009 Nov;24(6):485–97. DOI: 10.1097/JCN.0b013e3181b4baa0.

11. Marques MC, Lopes MJ, Rebola E, Pequito T. Autocuidado no Doente com Insuficiência Cardíaca. RIASE Revista Ibero-Americana de saúde e Envelhecimento. 2016; 2(1). DOI: 10.24902/r.riase.2016.2(1).439. DOI: 10.24902/r.riase.2016.2(1).439.

12. Cunha PLP. Manual Revisão Bibliográfica Sistemática Integrativa: a pesquisa baseada em evidências. Grupo Anima Educação; 2014.

13. The Joanna Briggs Institute (AU). The Joanna Briggs Institute Reviewers' Manual 2015: Methodology for JBI scoping reviews. Adelaide (AU): JBI; 2015.

14. The Joanna Briggs Institute (AU). The Joanna Briggs Institute critical cppraisal tools for use in JBI systematic reviews: Checklist for case control studies. Adelaide (AU): JBI; 2016.

15. The Joanna Briggs Institute. The New JBI Levels of Evidence and Grades. Levels of Evidence – Effectiveness.2014. Available in: http://joannabriggs.org/jbi-approach.html#tabbed-nav=Levels-of-Evidence. Ultimo acesso: 15/12/2016.

16. Tung HH, Lin CY, Chen KY, Chang CJ, Lin YP, Chou CH. Self-management intervention to improve self-care and quality of life in heart failure patients. Congest Hear Fail. 2013 Jul; 19(4): E9-E16. DOI: 10.1111/chf.12014.

17. Avila CW, Riegel B, Pokorski SC, Camey S, Silveira LCJ, Rabelo-Silva ER. Cross-cultural adaptation and psychometric testing of the brazilian version of the self-care of heart failure index version 6.2. Nurs Res Pract [Internet]. 2013; 2013:1–6. DOI: 10.1155 / 2013/178976.

18. Näsström LM, Idvall EAC, Strömberg AE. Heart failure patients' descriptions of participation in structured home care. Heal Expect. 2015;18(5):1384–96. DOI: 10.1111/hex.12120.

19. Marcuccilli L, Casida J, Peters RM. Modification of self-concept in patients with a left-ventricular assist device: An initial exploration. J Clin Nurs. 2013;22(17–18):2456–64. DOI: 10.1111/j.1365-2702.2012.04332.x.

20. Shaw JD, O'Neal DJ, Siddharthan K, Neugaard BI. Pilot program to improve self-management of patients with heart failure by redesigning care coordination. Nurs Res Pract. 2014 Apr 23; 17: 1–10. DOI: 10.1155/2014/836921

21. Tsai PK, Wang RH, Lee CS, Tsai LM, Chen HM. Determinants of self-care decision-making in hospitalised patients with heart failure. J Clin Nurs. 2015; 24(7–8):1101–11.

Correspondence: mcmarques@uevora.pt