Original Article

doi:10.31674/mjn.2023.v15i02.011

MJN

Self Care Behavior among Patients with Heart Failure in Hasan Sadikin General Hospital Bandung Indonesia

Istianah[1]*, Faridah Binti Mohd Said[2], Nisha Nambiar[2], Eny Kusmiran[2], Erni Hernawati[1], Muhammad Deri Ramadhan[1]

[1]Faculty of Nursing, Institute of Health Science Rajawali, Jawa Barat 40184, Indonesia
[2]Faculty of Nursing, Lincoln University College, Wisma Lincoln, No. 12-18, Jalan SS 6/12, 47301 Petaling Jaya, Selangor Darul Ehsan, Malaysia

**Corresponding Author's Email: istianah.phd@gmail.com*

ABSTRACT

Background: Self-care behavior is crucial for patients with heart failure to have positive outcomes, and it also serves as a predictor of wellbeing. The self-care tasks that these patients are required to carry out include managing their symptoms, sticking to numerous pharmaceutical regimens, following dietary salt restrictions, and self-monitoring weight. In many cases, a crucial aspect of heart failure treatment is still challenging. **Objective:** To determine the self-care practices of patients with heart failure at Hasan Sadikin General Hospital in Bandung, Indonesia. **Methods:** The study used a descriptive study with a consecutive sampling of 196 patients with heart failure in the clinic. Results: the demographic characteristics were mean of age (in year) 56.26±12.49, majority were male 144 respondents (73.57%), above the senior high school 128 respondents (65.3%), New York Heart Association NYHA II category 76 respondents (38.8%), NYHA III category at 92(46.9%), NYHA IV category at 28(14.3%), EF 33.65±9.311, length of HF 2.02± 1.08, BMI 25.48±1.98, total score of self-care behaviour 88.35±7.736. The score of the subvariable of self-care behavior is as follows: consulting behaviors 19.68±2.405, dietary behaviors 8.16±1.207, symptom perception 21.93 ±2.188, symptom recognition 9.65±1.393, self-care management 8.64±0.853, problem-solving behaviors 4.64±1.278, self-efficacy 20.20 ±1.979. **Conclusion:** Patients with heart failure exhibit poor self-care behavior; hence, nurse practitioners' involvement is required to promote self-care behavior among patients with heart failure.

Keywords: Behavior; Heart Failure; Self-Care

INTRODUCTION

The leading cause of death worldwide is cardiovascular disease; 17.9 million people died from it in 2016, accounting for 31% of all fatalities worldwide (WHO, 2022). One of these is heart failure (HF), which progresses over time and is known as advanced chronic HF (ACHF), which has a bad prognosis and a low quality of life (Hajouli & Ludhwani, 2022). With an aging population, the incidence of congestive heart failure (CHF) is continuing to rise, and in patients older than 20 years old in the United States, the prevalence of HF has increased from 5.7 million to 6.5 million, making it a major source of morbidity and mortality (Hajouli & Ludhwani, 2022). For each 1% increase in an area's poverty status, researchers see deaths from heart failure increasing by around 5 per 100,000 people. Heart failure contributes to 287,000 deaths per year (AHA, 2022).

Heart failure is a prevalent issue that shows no signs of abating (Sarastri *et al.*, 2023). About half of people who experience heart failure die within five years after being diagnosed. The Get with the Guidelines, Heart Failure Registry of the American Heart Association found higher heart failure mortality after CHF hospitalization over the period following the law's passage, adjusted for underlying patterns (Malik *et al.*, 2022). The degree of heart failure is determined by a scale of restrictions in the range of functional physical activity, and it is deemed stable when the symptoms and signs have not changed for more than one month. (Heidenreich *et al.*, 2022).

Received: May 24, 2023; Received in revised form: September 30, 2023; Accepted: October 3, 2023

Several major problems were extreme fatigue, shortness of breath, anxiety, hopelessness, and anger (Heidenreich *et al.*, 2022). Physical and mental symptoms of heart failure include dyspnea, exhaustion, discomfort, orthopnea, edema, loss of appetite, anxiety, and sadness.

The European Society of Cardiology and American Heart Association stress the value of self-care practices and self-management abilities to supplement medicines and enhance heart failure patients' symptoms and prognosis. Self-care management is a predictor of well-being. self-care management patterns among heart failure patients and the self-care activities that these patients must perform, including adhering to a multiple medication regimen, following dietary sodium restrictions, self-monitoring weight, and managing patient symptoms. Stimulant misuse and its synthetic derivatives, including ATS, can lead to relatively rare cardiac complications like acute myocardial infarction, arrhythmias, cardiomyopathy, and acute heart failure, as they stimulate the release of noradrenaline from sympathetic nerves (Shuib & Ismail, 2023). So, a critical component of heart failure care remains difficult in many cases (Heidenreich *et al.*, 2022).

For patients with heart failure to have successful results, self-care behavior is crucial. It's crucial to comprehend the aspects that affect self-care over time to provide suitable care (Pitora, 2022). Self-care practices are essential for lowering chronic heart failure (HF) morbidity and mortality, although results are still lacking globally. Self-care is something that is learned through activities aimed at helping themselves manage their desired lives, health, development, and well-being (WHO, 2022). The aim of Orem's theory of self-care is to help clients take care of themselves. Five themes showed up: (1) considering the future of the family; (2) taking into account one's past, even while demotivated; and (3) fatalistic reflection about one's own future. Barriers to changing behavior were (4) developing a physical activity routine and (5) a challenge departing from sociocultural and personal dietary customs. Clinicians and case managers can help patients improve self-regulation by teaching them situational and tactical skills to create individualized plans to change their lifestyles and avoid temptations (Nurselabs, 2023). Patients who do not adhere to their self-care routine are one example of practice issues (WHO, 2022). Better self-care could enhance patient outcomes, lower the need for readmission, and lessen the financial burden of global healthcare.

METHODOLOGY

The type of research in this study was quantitative with a descriptive design to systematically obtain information to describe a phenomenon of patients' perceptions of self-care. The population consists of all subjects or data with certain characteristics to be investigated. The participants in this study were patients with heart failure who came for treatment at the heart disease polyclinic in Hasan Sadikin Hospital. The number of patients who came every month was 100–130. The sample size will be calculated using G-Power Software Version 3.1.6 using the t test with a difference between two independent means (two groups) under the assumption α=0.05, an estimated effect size of 0.5, and a power level of 0.85. The estimation for the minimum sample is 176, assuming an attrition rate of 10%, so that the total minimum sample will be 196 respondents.

Primary data in this study were obtained from the results of a questionnaire about the Indonesian version of the self-care heart failure index (v7.2). To analyze or systematically obtain information about a phenomenon of patients' perceptions of self-care, central tendency data of mean, standard deviation, and minimum and maximum were used. To determine the sample from the population for this study, purposive sampling was used. The inclusion criteria for participants will be of the age 30 to 70 years, male or female, living with their family, Indonesian citizen, capable of speaking and writing in Bahasa, willing to participate in this study. The exclusion criteria for participants will be having severe psychiatric or cognitive problems.

Ethical Consideration

This research was supported and approved by the International Review Board of Hasan Sadikin Hospital, Indonesia with number LB.02/01/X.6.5/197/2021 on July 27, 2021.

RESULTS

The findings of the research that was done to determine the demographic profiles and phenomena of patients' perceptions of self-care.

Table 1: Demographyc Profile among Patients with Heart Failure in Hasan Sadikin General Hospital in Bandung, Indonesia (n=196)

Demographic Profile	
Age, Mean±SD	
Gender, f (%)	56.26 ± 12.49
Male	144 (73.5)
Female	52 (26.5)
Education Level, F(%)	
Above the Senior High School	128 (65.3)
Below Senior High School	68 (34.7)
Occupation, F(%)	
Employed	90 (45.9)
Unemployed	106 (54.1)
Length of Heart Failure (years), Mean ±SD	2.02± 1.08
BMI, Mean ±SD	25.48±1.98
EF, Mean ±SD	33.65±9.311
NYHA Class, F(%)	
I	0 (0)
II	76 (38.8)
III	92 (46.9)
IV	28 (14.3)

Table 2: The Self Care Behaviour amomg Patients with Heart Failure in Hasan Sadikin General Hospital in Bandung, Indonesia (n=196)

	Mean ±SD	Range	Min-Max
Total Score Self Care	88.35±7.736	17	68 - 101
Sub Scale of Self Care:			
a. Consulting Behaviors	19.68 ± 2.405	9	14 - 23
b. Dietary Behaviors	8.16 ± 1.207	9	3 - 12
c. Symptom Perception	21.93 ± 2.188	11	18 - 29
d. Symptom Recognition	4.64 ± 1.278	4	3 - 7
e. Self-Care Management	8.64 ± 0.853	5	6 - 11
f. Problem-Solving Behaviors	9.65 ± 1.393	6	6 - 12
g. Self Efficacy	20.20 ± 1.979	10	14 - 24

Based on the result of study on demographycs profiles found that patients with HF had the mean self care score were 88.35 ±7.736. with range 68 - 101.

DISCUSSION

Based on the results of the study on demography profiles among patients with HF, the mean age was 56.26 ± 12.49, the majority were male 144 respondents (73.57%), above the senior high school 128 respondents (65.3%), NYHA II 76 respondents (38.8%), NYHA III 92 respondents (46.9%), NYHA IV 28 respondents (14.3%), EF 33.65±9.311, length of HF 2.02±1.08, BMI 25.48±1.98. Table 2 shows the mean total score of self-care behavior among patients with HF, which were 88.35±7.736 with a range of 68–101. Patients with HF in Hasan Sadikin General Hospital endorse poor self-care behavior. The result of the study also showed the values of the seven factors of self-care were consulting behaviors 19.68±2.405, dietary behaviors 8.16±1.207, symptom perception 21.93±2.188, symptom recognition 9.65±1.393, self-care management 8.64±0.853, problem-solving behaviors 4.64±1.278, self-efficacy 20.20 ±1.979.

The European Society of Cardiology and American Heart Association stress the value of self-care practices and self-management abilities to supplement medicines and enhance heart failure patients' symptoms

and prognosis (Liu *et al.*, 2023). Self-care management is a predictor of well-being. self-care management patterns among patients with heart failure and the self-care activities that these patients must perform, including adhering to a multiple medication regimen, following dietary sodium restrictions, self-monitoring weight, and managing patient symptoms. In many cases, a crucial aspect of treating heart failure remains challenging. Self-care practices are essential for lowering chronic heart failure (HF) morbidity and mortality, although results are still lacking globally. In terms of comorbidity, cardiovascular diseases included conditions like hypertension, coronary artery disease, atrial fibrillation, heart failure, sick sinus syndrome, and supraventricular tachyarrhythmia. Respiratory disorders encompassed bronchial asthma, chronic obstructive pulmonary disease, and chronic lung disease, while central nervous diseases included epilepsy, Alzheimer's disease, Parkinson's disease, and myasthenia gravis. Psychiatric disorders were grouped as major depressive disorder, schizophrenia, and alcohol dependency (Lau *et al.*, 2019).

Self-care is something that is learned through activities aimed at helping themselves manage their desired lives, health, development, and well-being (WHO, 2022). The aim of Orem's theory of self-care is to help clients take care of themselves. Five themes showed up. The reasons for self-care were (1) considering the future of the family and (2) considering one's past, even while demotivated, and (3) fatalistic reflection about one's own future. Barriers to changing behavior were (4) developing a physical activity routine and (5) a challenge departing from sociocultural and personal dietary customs. Clinicians and case managers can help patients improve self-regulation by teaching them situational and tactical skills to create individualized plans to change their lifestyles and avoid temptations (WHO, 2022).

Patients with chronic heart failure must practice self-care and actively monitor their symptoms and signs to prevent deterioration (Heidenreich, 2022). Patient adherence to prescribed treatment is good to reduce frequent hospitalizations and improve the health of heart failure (HF) patients, it's important to match the level and effectiveness of self-care with the patient's specific needs (Artinian *et al.*, 2002). So, every study shows compliance with medications and self-care is low. Complex pharmaceutical management, continuing behavioral adjustments, and self-care are all necessary for the management of HF (e.g., dietary modification, sodium restriction, and monitoring of weight) (Meraz, 2023). Recent research found that low frequencies of participants engaged in appropriate self-care (self-care maintenance, 6.9%), self-care management, 14.7%, and self-care confidence (19%), as well as mean scores on the subscales of the Self-Care of Heart Failure Index that indicated inappropriate self-care (self-care maintenance: 53.2 (SD = 14.3), self-care management: 50.0 (SD = 20.3), and self-care confidence: 52.6 (SD = 22.7). It suggests that self-care is not suitable and went on to say that those who engaged in educational self-management programs showed stronger self-care habits (Akoit, Efendi, & Dewi, 2022).

The idea of self-care has changed over time. It is linked to personal responsibility for healthy behaviors, independence, and autonomy, as well as the creation of necessary processes for managing and keeping track of health issues. To maintain the highest level of well-being possible, people must incorporate self-care practices and advice. Through the inclusion of activities and skills that people should learn and employ to enhance their quality of life, self-care promotion is crucial in chronic disease (WHO, 2022).

Effective HF self-care is linked to several favorable outcomes, some of which may be as strong as or stronger than those reported with medication therapy. Re-hospitalization rates and mortality are decreasing, according to data from randomized controlled trials of HF disease management programs that also promote self-care as part of their services. These effects can last for months to years, especially when self-care instruction and other tactics are used. Some studies found no difference between usual treatment and disease management in terms of mortality or re-hospitalization. This may be partially caused by the exclusion of self-care practices, their inefficient use, or intervention durations that are too brief to have a lasting impact. Engagement in efficient self-care activities is essential for individuals with heart failure to achieve the best results and quality of life (Hafkamp *et al.*, 2022).

In HF, the term "self-care" refers to the actions people take to maintain their health (self-care maintenance) and the choices they make to prevent symptoms from getting worse when they do (self-care management). Adherence to medication guidelines, a low-salt diet, quitting smoking, moderate alcohol consumption, daily body weight monitoring, and HF compensation are all part of self-care maintenance. According to this

viewpoint, self-care refers to a patient's decision-making process for selecting actions that preserve physiological stability as well as their reaction to symptoms when they manifest (Liu *et al*., 2023). Nurses must understand self-care principles to lower hospital return rates, enhance patients' well-being, and boost patient happiness (Bit-Lian, Woei-Ling, & Yuen-Leng 2020). Interventions could include elements that promote empowerment (such as teaching situational and tactical skills to integrate self-care into a lifestyle), plan strategies for new habits using the identified self-regulation techniques and use tracking systems to improve the sustainability of the new lifestyle (Liu *et al.*, 2023). A previous study also advised the subsequent researcher to create nursing treatments that can enhance or promote self-care in HF patients. Nursing consultations may and should be used to educate patients on how to identify and treat their symptoms (Heidenreich *et al*., 2022).

CONCLUSION

Self-care is crucial for heart failure patients, as is widely known. The connections between health literacy, frailty, and self-care practices in individuals with heart failure are still poorly understood. Planning ideal self-care treatments that take into account the patients' characteristics, sharing the plan with patients, and eventually assisting them in providing proper self-care are the most important aspects of controlling heart failure. Future studies imply that health education should be developed to enhance people's self-care behaviors. Studies have demonstrated that performance is still subpar even though patient education on HF self-care is reinforced during discharge and/or outpatient follow-ups in many countries.

Conflict of Interest

The authors declare that they have no competing interests.

ACKNOWLEDGEMENT

The authors have received financial assistance for conducting the research, writing the article, or publishing it.

REFERENCES

Akoit, E. E., Efendi, F., & Dewi, Y. S. (2022). Impact of diabetes self-management education in middle-aged patients with type 2 diabetes mellitus: A systematic review. *Gaceta Medica de Caracas, 130*(Supl 5), S1183–S1195. https://doi.org/10.47307/GMC.2022.130.s5.44

Artinian, N. T., Magnan, M., Sloan, M., & Lange, M. P. (2002). Self-care behaviors among patients with heart failure. *Heart & Lung, 31*(3), 161-172. https://doi.org/10.1067/mhl.2002.123672

Bit-Lian, Y., Woei-Ling, T., & Yuen-Leng, L. (2020). A study on heart failure education principles: are nurses equipped with knowledge? *The Malaysian Journal of Nursing (MJN), 12*(2), 43-50. https://doi.org/10.31674/mjn.2020.v12i02.007

Hafkamp, F. J., Tio, R. A., Otterspoor, L. C., de Greef, T., van Steenbergen, G. J., van de Ven, A. R. T., Smits, G., Post, H., & van Veghel, D. (2022). Optimal effectiveness of heart failure management - an umbrella review of meta-analyses examining the effectiveness of interventions to reduce (re)hospitalizations in heart failure. *Heart Failure Reviews, 27*(5), 1683–1748. https://doi.org/10.1007/s10741-021-10212-8

Hajouli, S., & Ludhwani, D. (2022). Heart Failure and Ejection Fraction. In *StatPearls*. StatPearls Publishing. https://www.ncbi.nlm.nih.gov/books/NBK553115/ . Accessed on 13th September 2022.

Heidenreich, P. A., Bozkurt, B., Aguilar, D., Allen, L. A., Byun, J. J., Colvin, M. M., ... & Yancy, C. W. (2022). 2022 AHA/ACC/HFSA guideline for the management of heart failure: a report of the American College of Cardiology/American Heart Association Joint Committee on Clinical Practice Guidelines. *Journal of the American College of Cardiology, 79*(17), e263–e421. https://doi.org/10.1016/j.jacc.2021.12.012

Lau, B. T., Ng, S. Y., bin Kaspol Anuar, M. A., & Shuhaila, A. (2019). Pattern of Use and Prevalence of Potentially

Inappropriate Medications among Elderly Patients in a Malaysia Suburban Hospital. *International Journal of Advancement in Life Sciences Research, 2*(3), 30-38. https://doi.org/10.31632/ijalsr.2019v02i03.004

Liu, X., Liu, L., Li, Y., & Cao, X. (2023). The association between physical symptoms and self-care behaviours in heart failure patients with inadequate self-care behaviours: a cross-sectional study. *BMC Cardiovascular Disorders, 23*(1), 1–9. https://doi.org/10.1186/s12872-023-03247-2

Malik, A., Brito, D., Vaqar, S., & Chhabra, L. (2022). Congestive heart failure. StatPearls Publishing. https://www.ncbi.nlm.nih.gov/books/NBK430873/. Accessed on 20th August, 2022.

Meraz, R., Mcgee, J., Caldwell, E. P., Ke, W., & Osteen, K. (2023). the impact of resilience, health literacy, and social support on medication adherence and self-care among adults with heart failure. *Journal of Cardiovascular Nursing, 38*(5), 415–424. https://doi.org/10.1097/JCN.0000000000000948

Pitora, T., Pahria, T., & Sari, E. A. (2022). Analysis of factors related to self-care in chronic heart failure patients in Indonesian. *Media Keperawatan Indonesia, 5*(4), 309. https://doi.org/10.26714/mki.5.4.2022.309-316

Sarastri, Y., Zebua, J. I., Lubis, P. N., Zahra, F., & Lubis, A. C. (2023). Admission hyponatraemia as heart failure events predictor in patients with acute heart failure. *ESC Heart Failure*. https://doi.org/10.1002/ehf2.14472

Shuib, S., & Ismail, R. (2023). Holistic Approach to Ecstasy-induced Atrial Fibrillation in a Young Patient: A Case Report. *Malaysian Journal of Medical Research (MJMR), 7*(1), 25-29. https://doi.org/10.31674/mjmr.2023.v07i01.006

Wayne, G. (2023). Knowledge Deficit & Patient Education Nursing Care Plan and Management, Nurseslabs. https://nurseslabs.com/deficient-knowledge . Accessed on 18th July, 2022

World Health Organization. (2022). WHO Guideline on Self-Care Interventions for Health and Well-Being, 2022 Revision. https://www.who.int/publications/i/item/9789240052192 . Accessed on 12th July, 2022