

The Relationship between Self-Efficacy and Self-Care in Heart Failure Patients at Dr. Bratanata Hospital

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ABSTRACT

Heart failure was one of the number one causes of death in Indonesia in 2018 at 1.5%. Heart failure can result in the patient's inability to carry out self-care. Self-care can be influenced by self-efficacy where self-efficacy can encourage the process of self-control in carrying out self-care. This research is a quantitative descriptive research with a correlative descriptive research design with a cross sectional approach. The total sample was 74 respondents with heart failure, sampling used purposive sampling technique. The instrument used is the SCHFI questionnaire for self-care and CSE Scale questionnaire for self-efficacy. Univariate data analysis used frequency distribution and bivariate analysis used the Chi Square statistical test. There were 45 heart failure respondents with high self-efficacy (60.8%), 29 people with low self-efficacy (39.2%). 38 people (51.4%) had high self-care and 36 people (48.6%) had low self-care. From the results of the Chi Square analysis, the p-value was 0.000 (<0.05). There is a relationship between self-efficacy and self-care in heart failure patients at Dr. Hospital. Bratanata Jambi. It is hoped that nurses can provide health promotion in the form of motivation to increase self-efficacy in heart failure patients in carrying out self-care.

Keywords: Self-Efficacy, Heart Failure, Self-Care

INTRODUCTION

Cardiovascular disease is one of the non-communicable diseases (NCDs), which globally is the number one cause of death, more than 36 million people die every year. Cardiovascular disease is a disease caused by impaired function of the heart and blood vessels, one of which is heart failure. ('Kementerian Kesehatan RI. 2014. Situasi Kesehatan Jantung. Jakarta Selatan: Pusat Data dan Informasi Kementerian Kesehatan RI', no date)

According to data from the World *Health Organization* (WHO), the prevalence of heart failure in 2013 was approximately 550,000 cases per year in the United States. ('WHO. Prevention of Cardiovascular Disease.WHO Epidemiologi SubRegion AFRD and AFRE.Genewa.2016.', no date) Data from the *American Heart Association* (AHA) shows that as many as 375,000 people from heart failure die each year. ('Heart Disease and Stroke Statistics—2017 Update: A Report From the American Heart Association', no date) *Heart Disease and Stroke Statistics 2019 Update* predicts the number of people with heart failure will increase to 46% in 2030 with death data of more than 8 million people. ⁽⁴⁾ Based on national report data (Riskesdas) in 2018, the prevalence of heart failure in Indonesia was 1.5%. (Kementerian Kesehatan Republik Indonesia, 2018)

Heart failure is a chronic disease that can cause problems in various aspects of the sufferer's life. This is because in heart failure conditions there is an increase in *after load* and impaired diastolic filling which has the effect of reducing *cardiac output*. ⁽⁶⁾ When *cardiac output* cannot meet the body's needs, the heart will carry out a number of compensatory mechanisms to increase *cardiac output* and blood pressure. This compensatory mechanism will cause clinical manifestations of heart failure. ('Siti Setiati, Idrus Alwi, Aru W. Sudoyo, Marcellus Simadibrata K, Bambang Setiyohadi, Ari Fahrial Syam. Buku Ajar Ilmu Penyakit Dalam. Edisi 6. Jilid 2. Jakarta. Interna Publishing: 2014', no date)

The clinical manifestations of heart failure that most often appear in heart failure patients are shortness of breath and fatigue and affect daily life. ⁽⁶⁾ ('Adeleida Yuliana Anita Kaawoan. Hubungan Self Care dan Depresi dengan Kualitas Hidup Pasien Heart Failure di RSUP DR. R.D Kandou Manado : Cross Sectional Anlaitik(Tesis Magister). Depok: Universitas Indonesia; 2012', no date) These symptoms also have an impact directly on the patient's own functional status.

Functional limitations are something that often occurs in heart failure patients. Functional limitations refer to limitations in physical, social, role function and mental function as a result of heart failure. Low functional status will affect the patient's ability to carry out *self-care* ('Adeleida Yuliana Anita Kaawoan. Hubungan Self Care dan Depresi dengan Kualitas Hidup Pasien Heart Failure di RSUP DR. R.D Kandou Manado : Cross Sectional Anlaitik(Tesis Magister). Depok: Universitas Indonesia; 2012', no date)

Self-care or self-care is a decision made by the patient himself or with his family, so that he is able to overcome illness and maintain functional abilities and achieve well-being. Where patients are able to maintain physiological stability such as taking medication regularly, eating low-salt foods, exercising regularly, controlling body weight every day, not smoking and drinking alcohol. (8)

Self-care or self-care is very important for patients with chronic diseases, one of which is heart failure, where self-care programs have been proven to reduce hospital readmission rates, improve quality of life, and also reduce recurrence of heart failure symptoms. (Prihatiningsih and Sudyasih, 2018)

Based on the situation-specific theory of self-care in heart failure patients, it explains that self-care *will* be influenced by self-efficacy in carrying out self-care. Self-efficacy is an important concept that is part of the self-care process. (10) According to Bandura's (1997) social cognitive theory, self-efficacy is a person's self-assessment of their ability to plan and carry out actions that lead to achieving certain goals. Low self-efficacy will result in the inability of individual behavior to manage risky aspects, due to a lack of confidence in something that can be achieved. (Studi, Fakultas and Universitas, 2016) Self-efficacy in heart failure patients describes an individual's ability to make appropriate decisions in planning, monitoring and implementing treatment regimens throughout the individual's life. ('Nurjanah U, Umeda M, Fahrudin A. The Effectiveness of structured education Toward Self Efficacy and Health Promotion behavior at Heart Failure Patients at Local General Hospital (RSUD) Karawang , Uun Nurjanah, Miciko Umeda, Adi Fahrudin. Published onli.20', no date)

Self-efficacy of heart failure patients is an individual's belief in the ability to carry out self-care for their illness so that self-care management increases. Self-efficacy of heart failure patients in carrying out self-care can be seen from behavior such as regularity in taking medication, body weight and leg edema which are monitored regularly, eating low-salt foods, regular exercise, and the ability to recognize symptoms. (Putra, 2021)

Based on research conducted by Aleda MH Chen et al (Chen *et al.*, 2020) The results showed that self-efficacy was positively related to self-care where lower self-efficacy was associated with lower levels of self-care. Health professionals must actively engage all patients to gain self-efficacy to positively influence self-care. The higher the self-efficacy of heart failure patients, the greater the effort to take care of themselves or the more active and obedient to the recommended treatment, so that the rate of re-hospitalization can be reduced. (Buck *et al.*, 2015)

The results of a preliminary study conducted at the Cardiac Clinic of Dr. Bratanata Hospital, Jambi, through observation and short interviews with 5 heart failure clients who were undergoing re-treatment, showed that some of them were still unable to carry out self-care due to a lack of confidence in controlling the symptoms resulting from their disease.

Based on the description above, researchers are interested in conducting research on the relationship between self-efficacy and self-care management abilities *in* heart failure patients at the Heart Clinic Polyclinic at Dr. Bratanata Hospital, Jambi

METHOD

This research is quantitative research with the research design used is descriptive *Correlative* is carried out to determine whether there is a relationship between two or several variables approach *Cross-sectional*. This research was carried out from January to February at the heart clinic of Dr. Bratanata, Jambi City. The population in this study was all heart failure patients who visited the heart clinic at Bratanata Hospital, Jambi City in 2021, totaling 1,106 people. with the

number of samples in this study being 74 people. The method of sampling in this research is by using a purposive sampling technique, namely taking samples based on certain characteristics.

The instrument used in this research was the *Cardiac Self-Efficacy Scale* or CSE Scale questionnaire with 12 questions for self-efficacy there are 8 questions to control symptoms and 4 questions to maintain function and questionnaire *Self Care of Heart Failure Index* or SCHFI with 22 questions for self-care, there are 10 (ten) question items for the *self dimension maintenance care*, available 6 (six) question items for *self care management* and dimensions of *self care Confidence*

This questionnaire has been tested for validity and reliability on each question with 10 respondents and was declared valid with validity test results for self-efficacy of 0.681 – 0.944 and for self-care 0.640 – 0.867 and was declared reliable with an r Alpha value of 0.952.

RESULTS

Univariate Analysis

Table 1. Frequency Distribution of Characteristics of Heart Failure Respondents at the Heart Clinic at Dr Bratanata Hospital, Jambi City (n = 74)

Respondent Characteristics	f	%
Age		
26-35	3	4.1
36-45	7	9.5
46 – 55	22	29.7
56 – 65	32	43.2
> 65	10	13.5
Gender		
Man	57	77.0
Woman	17	23.0
Education		
No school	1	1.4
elementary school	26	35.1
JUNIOR HIGH SCHOOL	4	5.4
SENIOR HIGH SCHOOL	18	24.3
Income		
< 1 M	30	40.5
1- 3 M	18	24.3
3-5 M	26	35.1
> 5 M	0	0.0
Duration of Illness		
≤ 3 Months	4	5.4
> 3 Months	70	94.6
Total	74	100

Table 1. Shows the characteristics of respondents based on age. In this study, the age range was obtained Most were 56-65 years old (34.24%), the gender of most respondents was male (77.0%), the highest education was elementary school (35.1%), the majority of respondents had income < 1 million (40.5%), and the majority of heart failure patients had a disease duration of ≥ 3 months (94.6 %).

Table 2. Frequency distribution of respondents' self-efficacy at the Cardiac Clinic of Dr. Bratanata Hospital, Jambi 2022

Mean	Category	F	%
≤ 54	Low	36	48.6
>54	Tall	38	51.4
Total		74	100.0

Mean	Category	F	%
≤ 40	Low	29	39.2
>40	Tall	45	60.8
Total		74	100.0

Table 2. Shows data from 74 respondents with the majority being self-efficacy 45 people tall (60.8%) and low self-efficacy as many as 29 people (39.2).

Table 3 . Frequency distribution of respondents' self-care at the Cardiac Clinic of Dr. Bratanata Hospital, Jambi 2022

Self-Care Self-Efficacy		Total OR <i>p-value</i>	
Low	High		
N %	N %	N %	N %
Low 22 75.9%	7 24.1%	29 100.0%	
High 14 31.1%	31 68.9%	45 100.0%	6,959 0,000
Frequency 36 48.6%	38 51.4%	74 100.0%	

Shows data from 74 respondents with the majority having high self-care as many as 38 people (51.4%) and low self-care as many as 36 people (48.6%).

BIVARIATE ANALYSIS

Based on the results of table 1, it can be seen that of the 29 patients who had low self-efficacy, 22 (75.9%) had low self-care , 7 (24.1%) had high self-care, and of the 45 patients who had high self-efficacy, low self-care as many as 14 (31.1%), high self-care as many as 31 (68.9%). Furthermore, based on the results of the chi square statistical analysis test, the p-value was 0.000, where the p-value < α = 0.05. This means there is a relationship significant relationship between self-efficacy and self-care in heart failure patients at Dr. Bratanata Jambi in 2022. The statistical test results obtained an OR (Odds Ratio) of 6.959 , meaning that respondents who have high self-efficacy have a chance of having high self-care 6,959 times compared to respondents who have low self-efficacy.

DISCUSSION

Based on the results of the *chi square test*, the value of $p = 0.000 < \alpha (0.05)$ was obtained, so it can be concluded that there is a relationship between *self-efficacy* and *self-care* in heart failure patients at the DR Hospital Heart Clinic. Bratanata Jambi in 2022. The statistical test results obtained an OR (*Odds Ratio*) of 6.959, meaning that respondents who have high self-efficacy have a chance of having high *self-care* 6,959 times compared to respondents who have low self-efficacy.

This is in accordance with the theory which states that self-efficacy encourages the process of self-control to maintain the behavior needed to manage self-care in heart failure clients. Clients who have high self-efficacy can influence the client's self-confidence in undergoing therapy, including carrying out activity training, diet, stress management, medication, etc. (Dalam, Kokoh and Imtaq, 2014) The results of this study are in line with research conducted by Vando et al.⁽¹⁷⁾ in Nebraska, United States, where self-efficacy significantly influenced the ability to carry out self-care for heart failure patients.

Self-efficacy in heart failure patients is an individual's ability to make decisions for planning, monitoring and implementing treatment regimens throughout the individual's life. Heart failure patient self-efficacy focuses on patients' beliefs about their ability to engage in behaviors that can promote disease improvement and self-management, such as rest, low-salt diet, exercise, adherence to medication. ('Yvete C, at all, A Systematic review of the mediating role of knowledge, self-efficacy and self-care behaviour in telehealth patient with congestive heart failure. Tesis Unniversity of Hongkong di akses dari <http://dx.doi.org/10.2258/JH.2012.111009.2012>.' , no date)

The level of confidence of patients with heart failure will influence how well they adhere to self-care to improve health problems. If individuals are not confident in making decisions, this will affect self-care. (Riskamala *et al.*, 2020).

Self-efficacy is an important predictor that determines the level of compliance in implementing self-care management. The higher the self-efficacy, the better the *self-care* management that will be produced. A person who has strong self-efficacy will set high goals and stick to them. On the other hand, someone who has weak self-efficacy does not stick to their goals, resulting in non-compliance with self-care. (Dalam, Kokoh and Imtaq, 2014).

Self-care or self-care is a decision made by the patient himself or with his family, so that he is able to overcome illness and maintain functional abilities and achieve well-being. Where patients are able to maintain physiological stability such as taking medication regularly, eating low-salt foods, exercising regularly, controlling body weight every day, not smoking and drinking alcohol, limiting fluids, taking preventive measures, monitoring signs and symptoms and the ability to recognize changes in health behavior in patients.

Self-care for heart failure patients is very necessary because it can reduce the risk of death, improve the patient's quality of life to effectively manage symptoms and can also reduce hospital readmissions in heart failure patients. (Fitriyani, 2021).

Based on the results of this study, it can be seen how self-efficacy influences self-care in heart failure patients. Where patients have high confidence in their ability to know when to go to the health service when symptoms of disease appear, so they will have regular check-ups according to the schedule every month, and if signs and symptoms appear before the scheduled control time they will immediately go to the health service.

Confidence in your ability to recognize signs and symptoms that appear and visit health services is very important. The sooner the patient recognizes the signs and symptoms that appear as a result of the disease, the better they will be able to treat the disease. If respondents are unable to recognize the signs and symptoms that appear, there will likely be no management to overcome these worsening health changes. (Tabernero *et al.*, 2021)(Sterling *et al.*, 2022)(Abusafieh *et al.*, 2024)(Harshida and Sumana, 2017)(Hudiyawati *et al.*, 2023)(Calero-Molina *et al.*, 2022)(Hassan and Al-Fayyadh, 2023)(Peyman *et al.*, 2020)(Kurniawan *et al.*, 2021)(Aghajanloo *et al.*, 2021)(Mesa-Vieira *et al.*, 2021).

Patients who have high confidence will know how to take medication so they are able to undergo routine treatment such as taking medication regularly and following the recommendations

given in carrying out self-care management to increase the success of the healing program for heart failure patients. (Cocchieri, A., Riegel, B., D'Agostino, F., Rocco, G., Fida, R., Alvaro, R., & Vellone, E. Describing Self-Care in Italian Adults with Heart Failure and Identifying Determinants of Poor Self-Care. *European Journal of Cardiovascular Nursing*, 14(2),.2015).

CONCLUSION

1. The majority of respondents were aged 56-65 years (34.24%), the gender of most respondents was male (77.0%), the highest education was elementary school (35.1%), the majority of respondents had an income < 1 million (40.5%), and the majority of heart failure patients had a disease duration of ≥ 3 months (94.6%).
2. The majority of heart failure patients at the heart clinic of Dr. bratanata city of Jambi, had high self-efficacy, namely 45 people (60.8%).
3. The majority of heart failure patients at the heart clinic of Dr. Bratanata, Jambi City, has high Self Care , namely 38 people (51.4%).
4. The results obtained were a p-value of 0.000, where the p-value < $\alpha = 0.05$, there was a relationship between self-efficacy and self - care management abilities in heart failure patients at the heart clinic of Dr. Hospital. bratanata city of Jambi.

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