



SELF CARE ABILITY INFLUENCES THE QUALITY OF LIFE CONGESTIVE HEART FAILURE (CHF) PATIENTS

Elisa Mardika Putri¹, Rizka Febtrina², Eka Malfasari³

Nursing Study, STIKes Payung Negeri Pekanbaru

Email: rizka.febtrina@payungnegeri.ac.id

ABSTRACT	Keywords
<p>The prevalence of congestive heart failure in Indonesia is very high and is expected increase every year. Heart failure conditions and other manifestations cause a decrease in the quality of life due to the patient's inability to perform self-care properly. The purpose of this study was to determine the relationship between self-care ability and the quality of life of patients with congestive heart failure (CHF) in cardiac outpatient unit Arifin Achmad Hospital, Riau Province. This research was conducted on 64 respondents by purposive sampling technique. Method of this research was descriptive correlative with cross-sectional design. The instrument of this research is the Self Care of Heart Failure Index (SCHFI) questionnaire to measure self-care ability and Minnesota Living with Heart Failure Questionnaire (MLHFQ) questionnaire to measure quality of life. The results of this study indicate that the respondent's self-care ability is balanced by good and bad as many as 32 respondents (50.0%) and the quality of life of the majority is bad as many as 39 respondents (60.9%). Based on the chi square test it can be concluded that $p\text{ value} = 0.01 (<0.05)$ means that there is a significant relationship between self-care ability and the quality of life of people with congestive heart failure (CHF). The recommendation for further research is to study about the factors that influence self-care ability and quality of life in patients with congestive heart failure.</p>	<p>Self-care, Quality of life, Congestive heart failure</p>

INTRODUCTION

Heart is a vital organ of man who has a great function for human survival. Heart's function is in the circulatory system and blood pump, damage to the heart will disrupt other body functions (Sherwood, 2012). World Health Organization (WHO, 2014) states that in the world there are 20 million people per year die from cardiovascular disease. The American Heart Association (AHA) mentioned the prevalence of

congestive heart failure in the United States in 2015 there were 6.6 million people and is estimated to increase by 5.3 million people in 2030 (Benjamin et al., 2018).

One of the dangerous heart diseases is congestive heart failure (CHF) which is defined as the inability of the heart to pump blood to meet the needs of oxygen and nutrition of body tissues (Smeltzer, S. C., Bare, B. G., Hinkle, J. L., & Cheever, 2010).

In Indonesia, data from the Basic Health Research (RISKESDAS) in 2018 shows the prevalence of heart failure by 0.3% or estimated to be around 530,068 people (Kementerian Kesehatan RI Badan Penelitian dan Pengembangan, 2018). Congestive heart failure is a disease that causes death in Indonesia with a range of 92.7% of all heart diseases.

One of the main management of the heart failure patients is to perform maintenance independently. Several studies have shown that the results of treatment in patients with heart failure are better in patients engaged in self-care consistently. Self-care in patients with heart failure includes taking medication regularly, reducing salt consumption in the diet, exercising regularly, and monitoring symptoms regularly (Riegel, Lee, Dickson, & Carlson, 2010).

Self-care is very important for patients with chronic diseases, such as heart failure patients. The experience of suffering from heart failure has been proven to significantly improve patient knowledge regarding symptoms and signs of the disease. This will also affect the ability of self-care (Jang, Toth, & Yoo, 2012). Self-care ability acquired through experience chronic illness will have an impact on lifestyle changes and can directly affect the quality of life of patients themselves (Smeltzer, S. C., Bare, B. G., Hinkle, J. L., & Cheever, 2010).

Heart failure is a chronic disease that can cause a decrease in quality of life. This is because heart failure can have a negative impact on meeting basic needs, changes in body image, lack of self-care, daily behavior and activities, chronic fatigue, sexual dysfunction, and worries about the future. The inability of patients with heart failure to adapt to the disease, such as recognize early symptoms of the disease (such as shortness of breath, activity

intolerance, and fatigue) will affect the life she lived every day (Kaawoan, 2012).

Quality of life in general is subjective and varies according to each individual's perception of health and the ability to maintain it. The physiological changes to health and chronic conditions greatly affect the quality of life, especially those with heart failure.

The purpose of this study was to determine the relationship of the ability of self-care to the quality of life of patients with Congestive Heart Failure (CHF) in outpatients unit of Arifin Achmad Hospital at Riau Province.

MATERIALS AND METHODS

This research is a quantitative. The research design used is a descriptive cross-sectional correlation design. Samples about 64 respondents with congestive heart failure (CHF) who sought treatment in outpatients unit of Arifin Achmad Hospital at Riau Province were taken with a purposive sampling technique.

The research instrument used Self Care of Heart Failure Index (SCHFI) consisting of 20 questions questionnaire to measure self care ability with the value of the validity test showing all items of questions get a value of $r > 0.3$ and the results of reliability tests obtained Cronbach alpha = 0.956. Minnesota Living with Heart Failure Questionnaire (MLHFQ) questionnaire to measure quality of life with values Test questionnaire validity found all question items get a value of $r > 0.3$ and reliability test shows Cronbach alpha value = 0.95, consisting of four dimensions of quality of life namely physical, mental emotional and social.

This research has also been declared to have passed the health research ethics commission at the Faculty of Medicine at University of Riau. The analysis used is the

chi square test that is processed with a computer program.

RESULT

The results of the study can be seen in the table below.

Table 1
Distribution of Respondents by Characteristics

No	Variables	Frequency	Percentage (%)
Age			
1	Adolescents (12-20 yo)	1	1.6
2	Adult (21-55 yo)	29	45.3
3	Elderly (>55 yo)	34	53.1
Gender			
1	Male	38	59.4
2	Female	26	40.6
Marital status			
1	Merrige	41	64.1
2	Single	2	3.1
3	widower / widow	21	32.8
Education			
1	Elementary	6	9.4
2	Middle	17	26.6
3	Hight	27	42.2
4	College	14	21.9
Profession			
1	Civil servants	11	17.2
2	Employees	18	28.1
3	Trader	8	12.5
4	Farmer	3	4.7
5	Housewife	16	25
6	Not working	8	12.5
Total		64	100

Based on table 1, it can be seen that the majority of respondents are in the elderly stage, as many as 34 people (53.1%), male sex as many as 38 people (59.4%) and with marital status as many as 41 people (64.1%). The education level of the most respondents

was respondents with a high school education level of 27 respondents (42.2%) and there were 6 respondents (9.4%) who had an elementary school education. The majority of respondents' occupations are mostly respondents with private sector employees' work, with 18 respondents (28.1%).

Table 2
Distribution of Respondents based on the ability of self-care

No	Self-care	Frequency	Percentage (%)
1	Good	32	50
2	Poor	32	50
Total		64	100

Based on table 2 obtained from 64 respondents 32 respondents (50.0%) had good self-care abilities and 32 respondents (50.0%) had poor self-care abilities.

Table 3
Distribution of Respondents based on Quality of Life

No	Quality of Life	Frequency	Percentage (%)
1	Good	25	39.1
2	Poor	39	60.9
Total		64	100

Based on table 3, 39 respondents (60.9%) have a poor quality of life and there are 25 respondents (39.1%) who have a good quality of life.

Table 4
Relationship ability self-care with the quality of life of heart failure patients

Self car e	Quality of Life				Tot al	P val ue	OR
	Good		Poor				
	n	%	n	%			
Go od	18	56.3	14	43.8	32	0.0	4.59
Poo r	7	21.9	25	78.1	32	1	(1.54-4-

Tot	2	39.	3	60.	64	13.6
al	5	1	9	9)

Based on table 4 it was found that patients with good self-care ability experienced good quality of life as many as 18 respondents (56.3%). Whereas patients with poor self-care ability experienced poor quality of life as many as 25 respondents (78.1%), only 7 respondents (21.9%) who had poor self-care abilities experienced good quality of life. Chi square statistical test obtained p value that is 0.01 smaller than α , namely (0.05), thus H_0 is rejected, which means there is a significant relationship between the ability of self-care with the quality of life of patients with congestive heart failure (CHF) in outpatient units Arifin Achmad Hospital Riau Province. It was found that the value of OR = 4.592, meaning that patients with good self-care ability had a 4.59 times chance to experience good quality of life compared to patients with poor self-care ability.

DISCUSSION

Based on the results of research conducted on 64 respondents outpatient units Arifin Achmad Hospital Riau Province, the results showed that most of the respondents were in the elderly (> 55 years old) as many as 34 respondents (53.1%). In old age, a person's body will begin to experience a pathological physical condition, this condition is characterized by a decrease in energy, decreased energy, more fragile bones and so on. In general, the physical condition of the elderly will experience a lot of decreased function and structure, one of which is the decline in organ function is the cardiovascular system (Manurung, 20018). Heo *et al* (in (Akhmad, Primanda, & Istanti, 2016) also said that aging can result in decreased elasticity and widening of the aorta, thickening and stiffness of the heart valves, as well as an

increase in connective tissue resulting in heart failure in the elderly.

The results showed that the majority of respondents by sex were male as many as 38 respondents (59.4%). This is in line with research conducted by (Hamzah, 2016), in which the sex characteristics found the majority of respondents were male as many as 36 respondents (60%). Men have a risk of heart failure 2x greater than women at the age of 55-64 years, this is because one's susceptibility to heart failure is influenced by the role of female hormones namely estrogen, estrogen hormone increases the ratio of high density lipoprotein (HDL) which is a factor protective in preventing the process of atherosclerosis (Soerharto, in Hamzah, 2016).

The results also showed that the majority of respondents' marital status was married, that is, as many as 41 respondents (64.1%). Couples and families can be a good source of support systems for people with heart failure. Life partners can be supervisors of heart failure compliance patients in carrying out the management of heart failure (Maulidta, 2015).

The highest education status is senior high school, with 27 respondents (42.4%). According to (Majid, 2010) recurrence of heart failure and hospitalization occurs because they cannot recognize the symptoms of recurrence. According to researchers, the higher the level of education of a person, he will tend to behave positively because the education obtained will be the basis for understanding someone's need for information related to self-care and health care seeking behavior.

Most respondents' occupations were private employees, 18 respondents (28.1%). Smeltzer and Bare, (2010) say that one's work is very closely related to levels activity and rest. Risk factor greater heart disease caused by physical activity and lifestyle.

The results showed that respondents had poor self-care abilities as many as 32 respondents (50.0%) and good self-care abilities as many as 32 respondents (50.0%) of a total of 64 respondents with congestive heart failure (CHF). This is not in accordance with research conducted by (Prihatiningsih & Sudyasih, 2018) about self-care behavior which shows that most respondents have inadequate self-care behavior (self-care).

Self-care is very important for patients with chronic diseases, as it is in patients with heart failure. The experience of suffering from heart failure has been proven to significantly improve patient knowledge regarding symptoms and signs of the disease. This will also affect the ability of self-care ((Jang et al., 2012). The ability of self-care gained through the experience of suffering from a chronic illness will have an impact on lifestyle changes and can directly affect the quality of life (Farrell, 2016).

Self-care is divided into 3 dimensions, namely self-care maintenance or self-care dimensions that assess how patients adhere to medication and a healthy lifestyle such as taking medication regularly, exercising regularly and consuming salt in the diet. The second dimension is self-care management or self-management dimensions which assess how the patient's perception of symptoms includes the patient's ability to detect symptoms and interpret the results, from the interpretation of these results the patient will make a decision to handle the symptoms and carry out a treatment strategy and conduct an evaluation. The third dimension is self-care confidence or the dimension of self-confidence that assesses the patient's response to the symptoms that occur (Riegel, Dickson, & Faulkner, 2016).

In this study, of the three dimensions of self-care the lowest dimension is self-care maintenance or self-care dimensions. This is because the

majority of respondents are lacking in activities such as weighing, doing physical activity, preventing or avoiding sickness, low-salt diet, resulting in low behavior to recognize the recurrence symptoms of the disease.

The results showed 39 respondents had a poor quality of life (60.9%) and 25 respondents had a good quality of life (39.1%). This is in line with previous research which also found that the quality of life of heart failure patients is not good (bad) as much as 85% and the remaining 15% is moderate quality of life and none of the respondents have a good quality of life (Hamzah, 2016).

Patients with congestive heart failure will experience a decrease in quality of life due to patients with congestive heart failure feeling tired all the time and difficulty in carrying out daily activities. That is because the heart is unable to pump blood to meet the needs of body tissue. The body will divert blood from less important organs, especially the muscles in the legs and send them to the heart and brain. This can lead to disruption of fulfillment of daily activities and make sufferers of heart failure feel depressed by their illness so that it can make the patient's quality of life worse.

Based on the results of research using the chi square statistical test p value obtained 0.01 is smaller than the value of $\alpha = 0.05$, thus H_0 is rejected means that there is a relationship between the ability of self-care with the quality of life of patients with congestive heart failure (CHF) in Heart Poly Hospital Arifin Achmad, Riau Province with an OR value of 4.592, meaning that patients with good self-care ability have 4.59 times the opportunity to experience good quality of life compared to patients with poor self-care ability.

One of the effects of heart failure is activity intolerance, which is a decrease in the ability to do activities due to lack of

energy. This is caused by a decrease in cardiac output which results in an imbalance between the supply and demand for oxygen (O₂) in the body, resulting in decreased energy and limited activity. This condition is closely related to diastolic dysfunction caused by a decrease in the ejection fraction. Diastolic dysfunction has an impact on the ability of heart failure patients to fulfill their daily activities, so it tends to decrease in quality of life (Smeltzer, S. C., Bare, B. G., Hinkle, J. L., & Cheever, 2010)

According to the American Heart Association (AHA) (2018) states that physical activity can improve quality of life. Activities undertaken by patients with heart failure can also reduce anxiety, upset and anger which is one of the dimensions of quality of life, this is because oxygen that enters during activity to the brain will provide a sense of comfort. Research Jepsen, et al (2013 in (Wahyuni & Kurnia, 2014) also states that the readiness of a patient in physical activity has a positive relationship to help improve one's quality of life.

Modification of physical activity is part of the management of patients with heart failure where consistent minimal modification of lifestyle can help reduce the symptoms felt by the patient and reduce the need for more treatment, but must be adjusted to the level of symptoms experienced by the patient. Physical activity according to the patient's condition will help reduce sympathetic tone, encourage weight loss and improve symptoms and have an effect on activity tolerance in compensated and stable heart failure. However, in the condition of moderate to severe stage heart failure, limitation of physical activity and bed rest is very important to improve the clinical condition of the patient (Kaawoan, 2012).

The results of this study indicate that respondents still have poor self-care abilities. Most of respondents have not been

able to make decisions to reduce health functions, including respondents saying that they do not control food properly and lack of activity because respondents assume when they move they will experience shortness of breath. In addition, the majority of respondents did not regularly take medication and very rarely control their body weight and fluids, and the ignorance of respondents in recognizing signs of health changes. Lack of attention of respondents to themselves in maintaining the disease is very disruptive to the quality of life of patients with congestive heart failure.

The results of this study are in line with research conducted by Prihatiningsih & Sudyasih, (2018) where most respondents have inadequate self-care, of the three dimensions of self-care the lowest average value is the dimension of self-care such as weighing daily weight, exercise for at least 30 minutes, the behavior of preventing or avoiding pain, reducing salt consumption and checking swelling in the legs.

According to Jang (2009) self-care is very important for patients with chronic diseases, as it is in patients with heart failure. The experience of suffering from heart failure has been proven to significantly improve patient knowledge regarding symptoms and signs of the disease. This will also affect the ability of self-care. The ability of self-care gained through the experience of suffering from a chronic illness will have an impact on lifestyle changes and can directly affect the quality of life of patients themselves (Smeltzer & Bare, 2010).

Patients who have good self-care ability can improve the quality of life of patients themselves. Researchers assume that there is a significant relationship between the ability of self-care with quality of life in patients with congestive heart failure (CHF).

CONCLUSION

The results of this study prove that there is a significant relationship between the ability of self-care with the quality of life of patients with congestive heart failure (CHF) in outpatient care at Arifin Achmad Regional Hospital in Riau Province.

Patients with congestive heart failure are expected to improve their self-care behavior, starting from taking medication regularly, monitoring body weight, checking for swelling in the legs, doing physical activity for at least 30 minutes every day, reducing salt consumption in the diet and recognizing the signs and symptoms of the disease so they can minimize the symptoms that occur and improve the quality of life of sufferers themselves. The results of this study can be useful as a comparison to conduct further research on the factors that affect the ability of self-care and the factors that affect the quality of life in patients with congestive heart failure.

REFERENCE

- Akhmad, A. N., Primanda, Y., & Istanti, Y. P. (2016). KUALITAS HIDUP PASIEN GAGAL JANTUNG KONGESTIF BERDASARKAN KARAKTERISTIK DEMOGRAFI, 11(1), 27–34.
- Benjamin, E. J., Virani, S. S., Callaway, C. W., Chamberlain, A. M., Chang, A. R., Cheng, S., ... Muntner, P. (2018). *Heart disease and stroke statistics - 2018 update: A report from the American Heart Association. Circulation* (Vol. 137). <https://doi.org/10.1161/CIR.00000000000000558>
- Farrell, M. (2016). *Smeltzer & Bares Textbook of Medical-surgical Nursing*. Lippincott Williams & Wilkins Pty, Limited. Retrieved from <https://books.google.co.id/books?id=FobljwEACAAJ>
- Hamzah, R. (2016). Hubungan usia dan jenis kelamin dengan kualitas hidup pada penderita gagal jantung di RS PKU Muhammadiyah Yogyakarta. *Universitas 'Aisyiyah Yogyakarta*.
- Jang, Y., Toth, J., & Yoo, H. (2012). Similarities and Differences of Self-Care Behaviors Between Korean Americans and Caucasian Americans With Heart Failure. *Journal of Transcultural Nursing*, 23(3), 246–254. <https://doi.org/10.1177/1043659612441016>
- Kaawoan, A. Y. A. (2012). Hubungan Self Care dan Depresi dengan Kualitas Hidup Pasien Heart Failure di RSUP DR RD Kandou Manado. *Universitas Indonesia*, 1–87. Retrieved from [http://lib.ui.ac.id/file?file=digital/20304605-T30728 - Hubungan Self.pdf](http://lib.ui.ac.id/file?file=digital/20304605-T30728-Hubungan%20Self.pdf)
- Kementerian Kesehatan RI Badan Penelitian dan Pengembangan. (2018). Hasil Utama Riset Kesehatan Dasar. *Kementrian Kesehatan Republik Indonesia*, 1–100. <https://doi.org/10.1177/1043659612441016> Desember 2013
- Majid, A. (2010). *Analisis faktor-faktor yang berhubungan dengan kejadian rawat ulang pasien gagal jantung congestive*. Fik Ui.
- Manurung, N. (20018). Hubungan Pengetahuan Dan Sikap Lansia Dengan Pencegahan Hipertensi Di Desa Gotting Sidodadi Kabupaten Asahan. *Journal of Chemical Information and Modeling*, 12(9), 1–29. <https://doi.org/10.1007/978-1-4614-7990-1>
- Maulidta, K. W. (2015). Gambaran Karakteristik Pasien CHF di Instalasi Rawat Jalan RSUD Tugurejo Semarang. *Mutiara Medika*, 15(1), 54–58. Retrieved from <https://media.neliti.com/media/publica>

- tions/156736-ID-gambaran-karakteristik-pasien-chf-di-ins.pdf
- Prihatiningsih, D., & Sudyasih, T. (2018). Perawatan Diri Pada Pasien Gagal Jantung. <https://doi.org/10.17509/jpki.v4i2.13443>
- Riegel, B., Dickson, V. V., & Faulkner, K. M. (2016). The situation-specific theory of heart failure self-care revised and updated. *Journal of Cardiovascular Nursing*, 31(3), 226–235. <https://doi.org/10.1097/JCN.0000000000000244>
- Riegel, B., Lee, C. S., Dickson, V. V., & Carlson, B. (2010). An Update on the Self-Care of Heart Failure Index, 24(6), 485–497. <https://doi.org/10.1097/JCN.0b013e3181b4baa0>
- Sherwood, L. (2012). *Fisiologi manusia*. Jakarta: EGC.
- Smeltzer, S. C., Bare, B. G., Hinkle, J. L., & Cheever, K. H. (2010). *Textbook of: medical surgical nursing* (12th ed.). China: Lippincott Williams & Wilkins.
- Wahyuni, A., & Kurnia, O. S. (2014). Hubungan Self Care dan Motivasi dengan Kualitas Hidup Pasien Gagal Jantung Self-Care , Motivation , and Quality of Life among Patients with Heart Failure. *Jurnal Keperawatan Padjadjaran*, 2, 108–115. <https://doi.org/https://doi.org/10.24198/jkp.v2n2.5>
- WHO. (2014). *World health statistics 2012*. Retrieved from <https://doi.org/10.2307/334816>