



The Relationship between Coping Strategies and Quality of Life in Patients with Heart Failure

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<p>Track Record Article</p> <p>Accepted: 06 May 2023 Revised: 11 May 2023 Published: 30 July 2023</p> <p>How to cite : Miladiana, Intan, P., & Krisnawati, B. (2023). The Relationship between Coping Strategies and Quality of Life in Patients with Heart Failure. <i>Contagion: Scientific Periodical Journal of Public Health and Coastal Health</i>, 5(3), 721–731.</p>	<p style="text-align: center;">Abstract</p> <p><i>Heart failure is one of the most common cardiovascular diseases, causing high mortality and morbidity worldwide. Heart failure is a chronic disease that causes functional damage to the heart due to many symptoms that affect quality of life. The aim of this study was to clarify the relationship between coping strategies and quality of life in heart failure patients. This type of research is a quantitative study with a cross-sectional approach. This research was conducted on heart failure patients at the Cardiac Polyclinic at Sebelas Maret University Hospital in March-April 2023. The population of this study was all heart failure patients at the Cardiac Polyclinic at Sebelas Maret University Hospital as many as 1.114 patients. The sampling technique in this study was purposive sampling with a total sample of 294 patients. Data collection in this study used the Brief Cope Inventory questionnaire to measure coping strategies and the Minnesota Living Heart Failure Questionnaire (MLHFQ) to measure the quality of life in heart failure patients. Data analysis with pearson product moment correlation test. The results showed that there was a relationship between coping strategies and quality of life in heart failure patients (p-value 0.000) with a correlation coefficient (r) = 0.625, there was a very strong correlation between the two variables. It is recommended for health workers to educate, support, and motivate patients with heart failure who are undergoing routine treatment to pay attention to self-coping and improve the quality of life, and it is recommended that the patient's family provide support and treatment assistance to patients in carrying out treatment in order to improve the patient's quality of life.</i></p> <p>Keyword: Coping Strategies, Heart Failure, Quality of Life</p>
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INTRODUCTION

Heart failure is one of the most common cardiovascular diseases and causes high mortality and morbidity worldwide (Prihatiningsih et al., 2018). Heart failure is a chronic disease that causes functional damage to the heart due to many symptoms that affect quality of life. Heart failure is a structural or functional abnormality of the heart that can cause heart failure to distribute oxygen throughout the body (Kemenkes RI, 2018). Heart failure occurs when the heart fails to maintain sufficient circulation to meet the body's needs, resulting in fluid overload and decreased tissue perfusion. Low cardiac output triggers compensatory mechanisms that increase the heart's workload and eventually, there is resistance to filling the heart (Sejati et al., 2022).

According to World Health Organization (WHO) data for 2021, cardiovascular disease is the leading cause of death worldwide. Approximately 17.9 million people are estimated to die from cardiovascular disease, 38% of 17 million people die under the age of 70 and over three-quarters of a percent of deaths from cardiovascular disease occur in lower-middle-income countries (WHO, 2021). *American Heart Association (AHA)* According to data in the United States as many as 375,000 people per year die from heart failure. The prevalence of heart failure has increased by 46% from 2012 to 2030, more than 8 million people will suffer from heart failure at the age of over 18 years (AHA, 2018). The rate of heart disappointment in Indonesia expanded by 1.67% in 2018 compared to 2013. In Central Java, the predominance of heart disappointment based on doctor conclusion was around 1.5% or 29.550 individuals. In the interim, the number of individuals with heart disappointment is 0.4% or approximately 29.880, depending on their conclusion and side effects (Kemenkes RI, 2020).

The development of heart failure is increasingly making a person with a condition that continues to decline so that patients will be treated for a long time. The cause of patients being hospitalized again is that patients often complain of the symptoms of the disease they feel. Patients with heart failure undergoing long-term therapy will affect various important aspects of the patient's life, both physically, psychologically and socially (Rusli et al., 2021). Patients with chronic conditions know that if the disease they suffer is a very high risk of death. This will make patients with chronic conditions experience various problems that reduce their quality of life.

Quality of life may be a condition that's affected by an individual's physical and mental state, level of autonomy, and relationship between the person and the environment. The quality of life of heart disappointment patients is by and large destitute due to the assortment of utilitarian restrictions they involvement (Djamaludin et al., 2018). Heart failure can significantly limit a patient's quality of life in terms of physical function, energy, and quality of life (Purnamawati et al., 2018). One problem that patients with heart failure often experience is one of them is psychological problems. Psychological problems can affect the patient's disease condition because the patient will experience anxiety, discomfort, and other reactions to the conditions that are felt (Amininasab et al., 2018). Patients with heart failure need to adapt to their problems to adjust themselves in solving problems. This relates to the coping strategy that will be carried out.

Coping strategies are processes or efforts made by an individual to manage stress and pressure demands (Rismelina, 2020). Coping strategies influence decision making in heart failure patients (Rochester, 2019b). So if the strategy chosen is inappropriate, it can cause more

serious problems in individuals with heart failure, such as complications. This situation will affect the quality of life of people with heart failure.

Most people with heart failure understand that heart failure is a disease with the highest mortality rate. This will impact a poor quality of life if people with heart failure cannot overcome their own levels of anxiety, depression, and weakness. So we need a coping strategy for heart failure patients to overcome the problems that arise in each individual. Based on a preliminary survey that heart failure patients must receive long-term care and treatment, and many of the patients feel that heart failure is a disease that cannot be cured. This factor causes anxiety and stress in heart failure patients, so many patients have a decreased quality of life.

Based on the explanation that has been described in the background above. Researchers are interested in examining the relationship between good coping strategies and improving quality of life status in heart failure patients. Therefore, researchers will research "Relationship of Coping Strategies with Quality of Life in Patients with Heart Failure."

METHOD

This type of research is a quantitative study with a cross-sectional approach. This research was conducted on heart failure patients at the Cardiac Polyclinic at Sebelas Maret State University Hospital from March to April 2023.

The population used in this study were heart failure patients in outpatient care at Sebelas Maret University Hospital with a total population of 1.114 heart failure patients. Sampling technique with a non-probability sampling method, namely purposive sampling. Purposive sampling is a sample or research subject based on established criteria considering the problem formulation and research objectives (Ahyar et al., 2020). The samples used in this study were heart failure patients from the Cardiac Polyclinic at Severus Mallet University Hospital, with a total sample size of 294. Determining the number of samples using the slovin formula.

The sample criteria used as samples in this study are:

1. Heart failure patient at the cardiac polyclinic at Sebelas Maret University Hospital.
2. Patients who have been on heart failure treatment for a long time.
3. Patients with the New York Heart Association classification I – IV.
4. Heart failure patients aged 19 – 85 years.
5. Heart failure patients who can read and write.
6. Heart failure patients who are willing to be respondents and sign informed consent.

The independent variable in this study is coping strategies, while the dependent variable is quality of life. The data collection technique in this study used a questionnaire consisting of

two questionnaires, namely the Brief Cope Inventory questionnaire to measure coping strategies and the Minnesota Living with heart failure questionnaire (MLHFQ) to measure quality of life in heart failure patients.

Data processing uses univariate data analysis with frequency distributions and bivariate uses Pearson product moment correlation test to analyze relationships between independent and dependent variables. This research has received approval from the Health Research Ethics Commission Dr. Moewardi General Hospital, issuing ethical approval letter number 353/III/HREC/2023.

RESULTS

Table 1. Characteristics of Respondents (n= 294)

Characteristics	N	%
Gender		
Female	132	44,8
Male	162	55,2
Age		
19 – 35 years	2	0,68
36 - 50 years	41	13,9
51 - 65 years	206	70,0
66 - 85 years	45	15,3
Last education		
No school	30	10,2
Elementary school	31	10,5
Junior high school	31	10,5
Senior High School	90	30,6
Vocational School	58	19,7
Associate Degree	6	2,00
Bachelor Degree	48	16,3
Work		
Not Working/Housewife	98	33,3
Self-employed	95	32,3
Civil Servants	13	4,42
Pensioner	57	19,3
Laborer	32	10,8
Employee	5	1,7
Long Suffered		
≤ 5 years	186	63,3
≥ 5 years	108	36,7
New York Heart Association Classification		
New York Heart Association II	150	49
New York Heart Association III	144	51

Based on Table 1. the results of data analysis on the characteristics of the respondents, the majority of respondents with male gender with a total of 162 respondents (55.2%). Most respondents were aged 51-65 years with 206 respondents (70%). Most of the respondents' last level of education was high school with a total of 90 respondents (30.6%). Respondents who did not work/homemakers in this research were 98 respondents (33.3%). The majority of

respondents who participated in this study suffered from suffering for less than 5 years with a total of 186 respondents (63.2%). Respondents with the New York Heart Association II classification were more than those with the New York Heart Association III classification, with 150 (51%) respondents.

Table 2. Levels of Coping Strategies in Heart Failure Patients

Characteristics	N	%
Adaptif	277	94,2
Maladaptive	17	5,8
Total	294	100

Based on Table 2. Categorical frequency data from the results of the level of respondent's coping strategies in terms of the data presented in Table 2, the most respondents showed adaptive coping strategies with 277 respondents (94.2%), and as many as 17 respondents (5.8%) showed the level of maladaptive coping strategies.

Table 3. Relationship between Coping Strategies and Quality of Life in Heart Failure Patients

Variable	n	r	p
The relationship between coping strategies and quality of life	294	0,625**	0,000

Based on Table 3. The results of the moment product correlation test obtained a Pearson correlation value of 0.625, which means a very strong correlation between the two variables. Furthermore, a significance p-value of $0.000 < 0.05$, suggests rejection of H_0 and acceptance of H_a , suggesting a statistical association between coping strategies and quality of life in heart failure patients.

DISCUSSION

1. Respondent Demographic Characteristics

Based on age category, most respondents with heart failure at Sebelas Maret University Hospital were aged 51-65. This research is in line with Saida et al., (2020) those who get the results the most age affected by heart failure is > 50 years with a total of 91 respondents (88.5%). Similar research conducted by Kristinawati et al. (2021) stated that the more people get older, from the age range of 46-65, the more affected they are by diseases, including heart failure. The theory is that heart function changes with age. In people over the age of 40, the left heart muscle contracts in response to the light workload required by the heart (Nursita et al., 2020). Structural and functional changes occur in the heart and blood vessels when a person enters the age of 60-70 years, all risks will increase with increasing age (Namazi et al., 2021).

Based on the distribution of sex characteristics, most respondents are male. In line with research conducted by Kristinawati et al., (2018) the result showed that there were 41

male respondents (61.2%) more than 26 female respondents (38.8%). The male sex has less estrogen hormone than women. The amount of this hormone will decrease when you enter menopause. The hormone estrogen can provide a protective or protective effect on the flow of blood from the heart to the rest of the body and vice versa. Therefore, when entering menopause, both women and men have the same opportunity to experience cardiovascular disorders, but men will be more susceptible to heart failure (Utomo et al., 2019).

Based on the description above, most respondents' last education was high school. In line with the research conducted. In line with the research conducted Utomo et al., (2019) suggested that the highest frequency level was in high school. The higher the level of education in patients, the easier it is to receive and absorb information and have more knowledge compared to someone with a lower level of education (Yunita et al., 2020).

Based on the distribution of job characteristics, most respondents work as housewives or do not work. This study's results align with (Risprawati, 2019) who said that the duration of work for homemakers requires long hours, thereby increasing the risk of heart failure. The heavy work done by a housewife is a burden that can result in serious health problems. Someone not working tends to do strenuous activities at home and has less time to rest (Mohd Saat et al., 2021).

Based on the long-suffering frequency distribution in this study, most respondents had heart failure for less than 5 years. In line with the research that has been carried out Harisa et al., (2020) that the average respondent has had heart failure for a period of three to five years. Patients who have suffered from heart failure for a long time have experiences that can affect their perception or understanding of the recurrence symptoms they are experiencing and have received much information regarding therapy for their disease (Siregar, 2019).

Based on the New York Heart Association classification, most respondents had more New York Heart Association II degrees than New York Heart Association III. This research aligns with the results of Saida et al., (2020) which explains that most heart failure respondents have New York Heart Association II degrees. Patients with New York Heart Association II degree have symptoms such as palpitations and also dyspnea which will appear when people with heart failure do physical activity and will disappear at rest (Indrajaya, 2020).

2. Coping Strategies in Patients with Heart Failure

In this study, the majority of respondents used adaptive coping. This is in line with research Ryandini (2020) who said that the coping strategy of heart failure patients was adaptive coping (65%). The results of other studies conducted by Rusli et al., (2021) which shows that as many as 98 respondents (60.5%) have adaptive coping. This greatly affects the patient's condition during the treatment period.

Coping strategy is an effort or effort of an individual to free himself from real problems and is a form of cognitive and behavioral effort to overcome, reduce and survive the illness he is suffering from (Muriithi et al., 2020). In this study, 277 respondents (94.2%) used adaptive coping so that the condition of the respondents became better.

One of the adaptive coping strategies for heart failure patients in this study is influenced by the belief in God. Respondents believed they had good prejudice towards God and accepted every provision God gave. Research results Rusli et al., (2021) shows 98 respondents (60.5%) use adaptive coping they overcome their problems by praying and drawing closer to Allah.

Meanwhile, respondents who have maladaptive coping are influenced by the level of stress and anxiety about their illness. Respondents were very worried about their illness. Research Ryandini (2020) states that undergoing therapy for a long time can affect various important aspects of the patient's life, both physically, psychologically, and socially. Psychological problems that often occur in patients with heart failure are stress, feeling helpless, and hopelessness about the conditions they have experienced.

From the results at the category level, in this study, respondents used maladaptive coping strategies because respondents felt worried about their illness. Respondents feel their illness will not be cured and are bored with taking medication continuously. This is in line with research conducted by Balqis et al., (2018) stating that someone who has been on medication for a long time but the expected recovery rate is not as expected can affect treatment adherence and the patient will feel bored. In general, patients who suffer from a disease for a long time and do not recover will make the patient feel bored taking the drug.

3. Quality of Life in Patients with Heart Failure

The distribution of quality of life in heart failure patients in this study included 17 patients with poor quality of life (5.8%) and patients with moderate quality of life, 277 respondents (94.2%). Respondents in this study rarely experienced swelling in their feet, but they found it difficult to walk and go up and down stairs. In line with research Saida et al., (2020) The majority of low quality respondents indicated that it was related to their

level of physical fitness in performing daily activities. This is often since the heart cannot pump blood to meet the wants of the body's tissues. The body occupies blood absent from less crucial organs, particularly the leg muscles, to the heart and brain (Mahanani, 2018).

Heart failure also causes respondents to feel depressed or depressed and find it difficult to concentrate. In line with research conducted by Sejati et al., (2022) The results show that the majority of patients feel they are a burden on their family, feel depressed about their illness, and are unable to control themselves. Research conducted by Izzuddin et al., (2020) states that depressive symptoms are closely related to the incidence of heart failure. Limited activity increases the incidence of depression in patients, because patients will be more easily bored with their condition. This can affect the quality of life in patients with heart failure.

Quality of life is a condition in which a patient suffers from a disease but can still feel comfortable physically, psychologically, socially and spiritually and can utilize his life for the happiness of himself and others (Zulmi, 2018). Quality of life greatly influences how an individual lives with all his conditions. A person with heart failure for over five years has a poorer quality of life. Results of research conducted by Saida et al., (2020) revealed that most patients with a travel history of less than five years have a better quality of life. At the same time, patients who have long suffered from heart failure have a worse condition due to changes in their body condition. This will affect the good or bad quality of life in an individual with heart failure.

4. The Relationship between Coping Strategies and Quality of Life in Patients with Heart Failure

The results of this study describe the association between coping strategies and quality of life in heart failure patients. A p-value of $0.000 < 0.05$, so H_0 was rejected in this study. Therefore, there is a significant association between coping strategies and quality of life in heart failure patients. This study's results align with the research Febriana et al., (2020), which states that a very close relationship exists between coping and quality of life. This means that coping strategies can improve an individual's quality of life despite experiencing severe problems.

This study's results align with research conducted by Ulusoy et al., (2020) which shows the relationship between coping strategies and quality of life. Research from Malleshappa (2018) also stated that adaptive coping such as social support is an important factor in maintaining the quality of life in patients. Social support from both the family and the environment also plays a role in improving the quality of life. Support from the closest

people is a very good form of adaptive coping for patients with heart failure (Chaerunnisa et al., 2018).

Adaptive coping strategies can make an individual think positively without worrying about anything that can reduce his health condition. Research conducted by Harisa et al. (2020) said that patients with adaptive coping strategies will always maintain positive psychological aspects to reduce stress levels. But in fact, patients with chronic diseases often show maladaptive coping, thus worsening the patient's condition which results in poor patient quality of life.

The poor quality of life aggravates the disease state and vice versa. Illness can impair quality of life, especially for chronic conditions that are difficult to cure (Asafitri et al., 2019). The majority of heart failure patients are very worried about their condition. Many of them have poor coping which affects their health condition. At the same time, patients with good coping have enthusiasm and positive thoughts to recover and are always regular in treatment. In line with research Rochester (2019) significant results were obtained between coping strategies and quality of life, the higher the life strategy used, the better one's quality of life.

CONCLUSION

The results of this study indicated that most respondents who actively participated were aged 51-65 years, female, had high school education, employment status was not working/housewife, with a duration of suffering < 5 years, with the New York Heart Association II classification. In this study, the level of coping in heart failure patients at Sebelas Maret University Hospital showed that there were 277 respondents (94.2%) with adaptive coping levels, 17 respondents (5.8%) with maladaptive coping levels. Quality of life of heart failure patients at Sebelas Maret University Hospital showed that 17 respondents (5.8%) had poor quality of life and 277 respondents (94.2%) had moderate quality of life. The correlation test results showed a significant relationship between coping strategies and quality of life in heart failure patients at Sebelas Maret University Hospital (p-value 0.000) <0.05.

It is recommended that health workers educate, support and motivate patients with heart failure who are undergoing routine treatment to pay attention to self-coping and improve their quality of life. Furthermore, it is suggested that families and patients are aware of better coping strategies so that they are expected to help improve the quality of life of failing patients by providing knowledge through education to improve quality of life.

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