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Judul Artikel : **The Relationship Between Family Support and Self-Care in Heart Failure Patients in Garut City: A Cross-sectional Study**

Jurnal **:** ***Journal of Health and Nutrition Research***

Penulis **: Sulastini, Bambang Aditya Nugraha, Rahmi Nurul Madinah**

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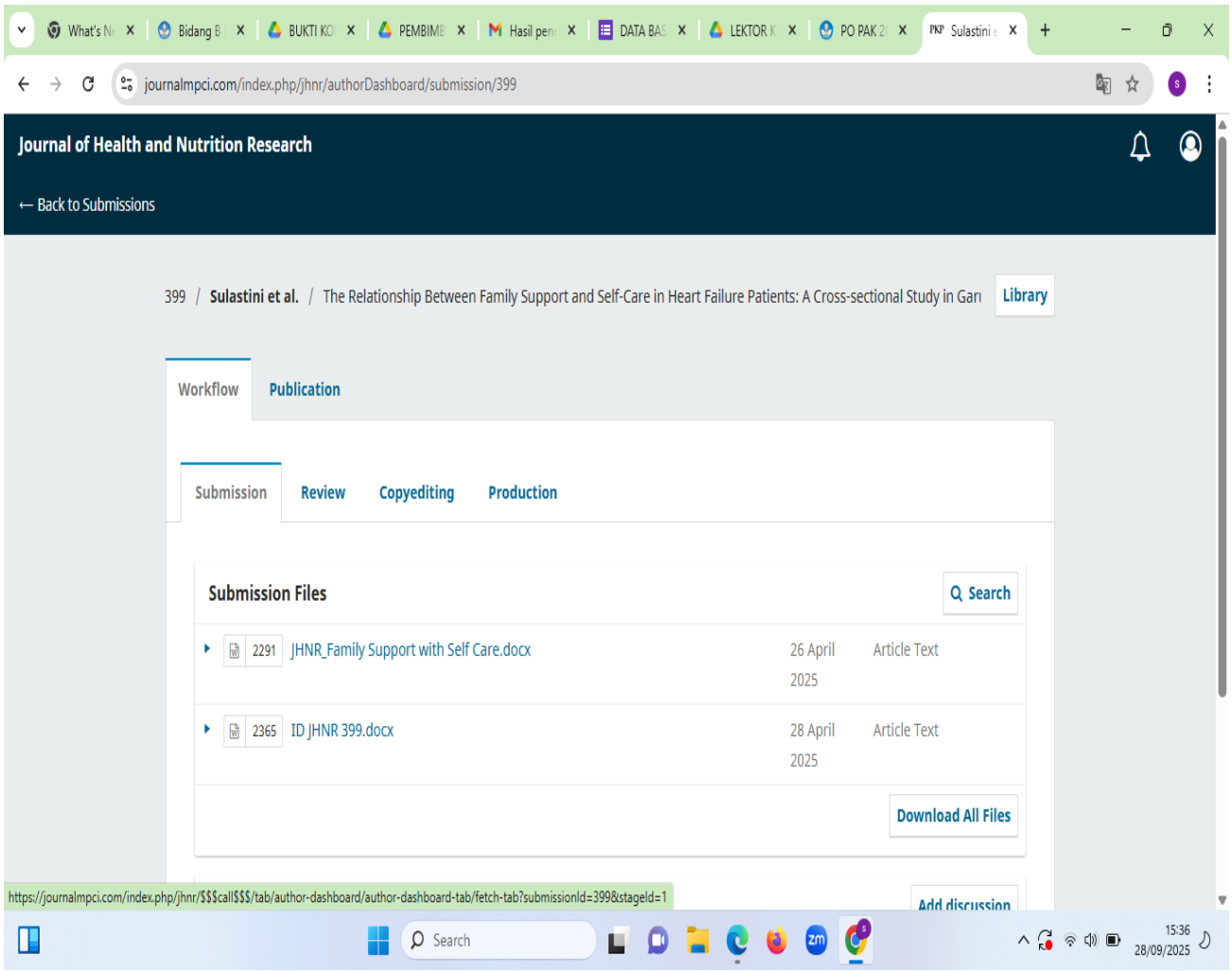
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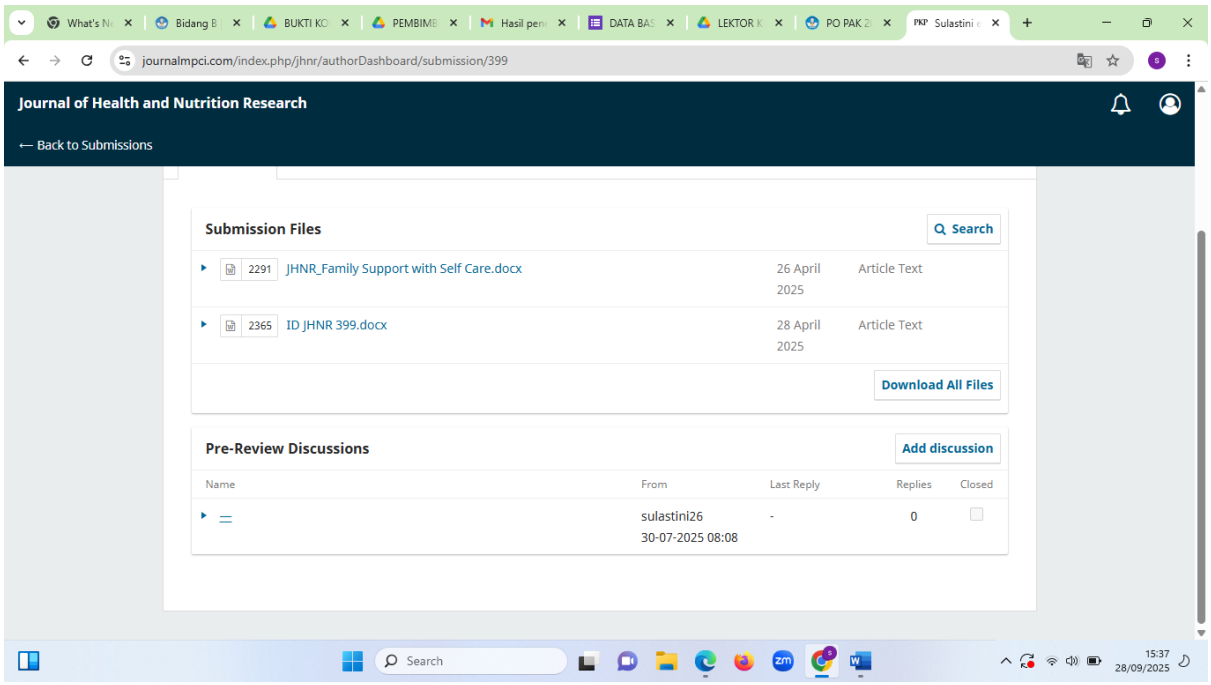
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		(REVIEWER'S SECTION)
		REVIEWER'S COMMENTS/SUGGESTIONS
1.	**Title** • Is the title clear, concise, and reflective of the study's content?	Completed
2.	**Abstract** • Is the abstract a standalone summary of the study's objectives, methods, key findings, and implications?	• Please correct the keywords provided; they are non-English language which are off the Journal guidelines. • The current word count is below the word range required for the journal type, please check and follow the rule. • Please provide sign of each point of abstract according JHNR author guideline (e.g., Background/Introduction, Aims, Methods, Results and Discussion) and replace "finding indicated" with "results showed" • Please use p < 0.001 or < 0.0001 to show a very small p value instead of 0.000 and it is interesting to know what is exactly the p value from the study instead of just 0.0000. • Please provide a brief conclusion.
3.	**Introduction** • Does the introduction provide sufficient background and context for the study? • Does it acknowledge the shortcomings or gaps in the existing knowledge? • Does it clearly state the objectives or research aims?	Completed: previous studies have been included in the current manuscript, and they are suitable and relevant to build up the current study background.
4.	**Method** • Is the research design well-defined? • Is the sample size adequate, and are the sampling methods described? • Are the methods and materials described in sufficient detail to allow replication? • Are any relevant tools, instruments, or software clearly described, including their sources and versions? • Are the data collection and analysis methods appropriate? • Are ethical considerations addressed (e.g., informed consent, ethical approval)?	• Please include the reference of a family support and SCHFI questionnaire. • If available, please include the Statistics software used for data analysis. • Please move 1-3 sentences of the end paragraph to the 1st paragraphs start. • Please replace "was approved" with ‘‘was given favorable ethical opinion".

5.	**Results** • Are the results presented clearly and logically? • Are all relevant data included? • Are all tables and figures cited consecutively in the text?	• Please replace “mothers of patients” with “patient mothers as clarity is required here; the method says the respondents are diagnosed heart failure patients. • Please describe NYHA and others abbreviation at the very first time mentioned across manuscript. • Table 4.1 is not available in manuscript, please correct it. • Please reduces the use of “based on”, it has too many repetitions.
6.	**Discussions** • Are the study’s findings discussed in the context of the research question and literature? • Do the authors contrast their findings with existing research in the field? • Is there a critical analysis of the results, including limitations and potential biases?	• This section was written properly but there are some sentences that possess similar points. Please write them concisely.
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9.	**English Proficiency**	Some places require writing concisely but overall, the quality of writing is good.
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Minor Revision		**Reject**	

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The Relationship Between Family Support and Self-Care in Heart Failure Patients in Garut City: A Cross-sectional Study

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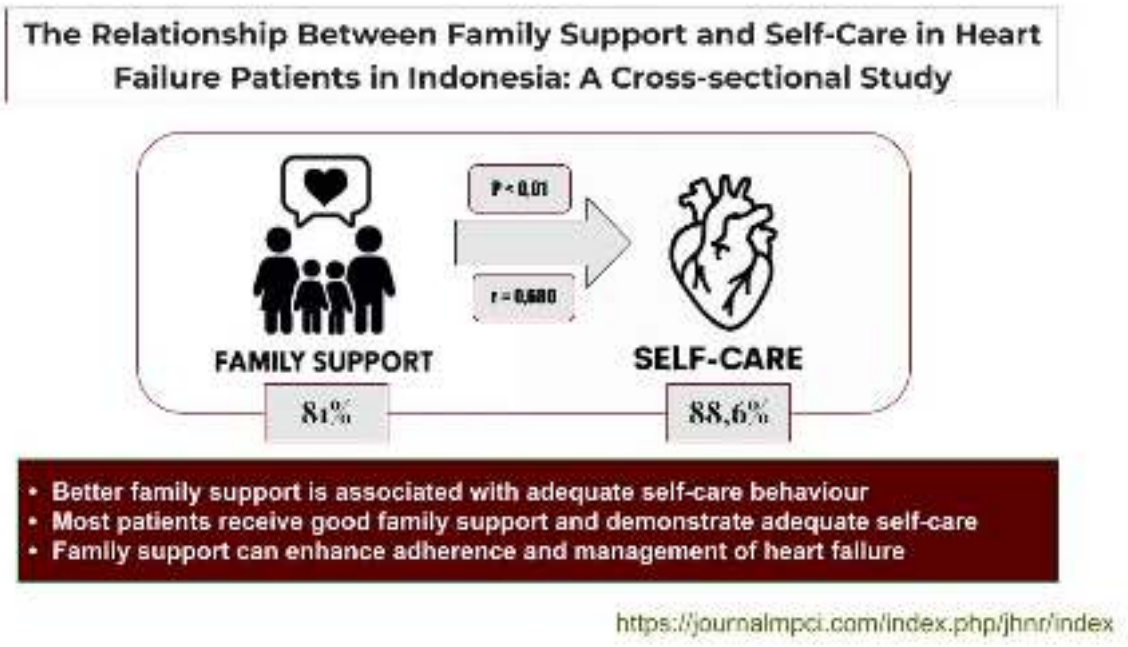
ABSTRACT

Heart failure is a pathophysiological condition due to impaired heart function in pumping blood that is chronic and progressive, and contributes to high morbidity and mortality rates. Reducing these rates requires a treatment strategy that maintains the health and well-being of patients, one of which is through effective self-care management. In its implementation, the role of family is an important aspect as a source of non-medical support that can motivate patients to undergo treatment. This research aimed examine the relationship between family support and self-care practices among individuals with heart failure attending polyclinics in Garut City. This study employed a quantitative design using a cross-sectional approach and correlation analysis. ~~A total of~~ 105 participants were selected through purposive sampling. Data were collected using a family support questionnaire and the Self-Care of Heart Failure Index (SCHFI) version 7.2, and analyzed using the Spearman Rank correlation test. The ~~findings indicated~~ that most participants had family support and received the good category, and demonstrated adequate self-care practices. A statistically significant correlation was identified between family support and self-care behavior ($p = 0.000$; $r = 0.680$).

Key Messages:

- Family support had a significant association with self-care behaviors of heart failure patients, with a strong correlation ($p = 0.000$; $r = 0.680$).
- Most patients received good family support and demonstrated adequate self-care, reflecting the important role of family in supporting chronic disease management.

GRAPHICAL ABSTRACT



INTRODUCTION

Heart failure is a condition in which the heart is unable to pump blood efficiently, resulting in poor circulation and inadequate oxygen supply to the body's organs, thereby impairing their optimal function (1). Hypertension and coronary artery disease are the primary causes of heart failure, with the latter involving the narrowing of the arteries that supply blood to the heart muscle due to the buildup of plaque (1). Cardiovascular diseases represent the primary cause of mortality worldwide, responsible for approximately 17.9 million deaths annually, which constitutes about 32% of all global deaths (2). In Indonesia, heart disease ranks as the second most common cause of mortality, with a reported prevalence rate of 1.5% (3).

To reduce the prevalence and mortality rates of heart failure, a comprehensive management approach is required, incorporating both pharmacological and non-pharmacological therapies. Management of heart failure must be done comprehensively by combining both approaches to achieve optimal results for patients. Family involvement in the care of heart failure patients plays a crucial role in supporting the stability and maintenance of the patient's health status, it has been proven effective in increasing patient adherence to treatment regimens and increasing the patients' ability to monitor and manage their health conditions independently (5).

Family support in heart failure patients allows them to play an active role in increasing knowledge that supports health and helps patient adaptation in daily life, including attitudes, actions, and family acceptance, which is manifested in the form of services provided to family members suffering from heart failure (6). An individual's capacity for self-care encompasses the awareness and confidence required to achieve, maintain, or improve their overall health and well-being (7). Self-care is a fundamental component in the management of chronic diseases, involving a range of competencies, behaviors, and proactive measures performed by individuals to maintain and enhance their health (8).

An essential strategy in managing heart failure involves empowering patients to engage in effective self-care. Self-care in heart failure patients includes medication adherence, lifestyle changes, symptom monitoring, and management of symptoms that arise (9). Research shows the importance of implementing healthy living behaviors in heart failure patients in the form of symptom management, as well as determining the level of patient responsibility, apart from adherence to treatment (10). Based on the results of the preliminary study, it shows that 7 out of 10 patients do not know how to identify the signs of symptoms that appear, the diet that must be followed, and do not monitor their body weight. In addition, 3 other patients needed assistance in carrying out activities at home.

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In this context, healthcare professionals play a crucial role in assessing the level of family support and evaluating self-care practices among patients with heart failure. This is necessary to understand the patient's understanding and behavior to maintain physical stability, avoid behaviors that can worsen conditions, and detect possible worsening of heart failure. Building on this context, the present study aims to examine the association between family support and self-care behaviors among patients with heart failure attending a polyclinic in Garut.

METHODS

This study employed a quantitative approach with a cross-sectional design, involving a population of outpatients who had been diagnosed with heart failure at the Polyclinic in Garut City, totaling 141 patients. Inclusion criteria for the sample included individuals over 18 years of age, patients diagnosed with heart failure for more than six months, and those receiving outpatient care at the Polyclinic in Garut City. A purposive sampling technique was applied, resulting in a sample size of 105 participants.

Data collection was conducted using a family support questionnaire, which assessed four indicators: emotional ~~support~~, instrumental ~~support~~, informational ~~support~~, and overall support, with a total of 15 questions on a Likert scale. Additionally, the Self-Care of Heart Failure Index (SCHFI) was employed for the self-care assessment, encompassing three dimensions: care, maintenance, and symptom perception and management, comprising 29 questions, this questionnaire has been tested for validity with the SCHFI instrument, namely with a construct validity value of 0.793 so that this instrument is declared valid. With subscales of Cronbach's α value in order, namely self-care management α = 0.790, symptom perception α = 0.790, and self-care management α = 0.705, it was found that all question items had r count (0.97) > r table, so that all question items were valid. The reliability of the SCHFI questionnaire was assessed using a test-retest method (stability), measured by the correlation coefficient between the initial trial and the subsequent one. The correlation values ranged from 0.73 to 0.92, indicating a positive and statistically significant relationship, thus confirming the reliability of the instrument. The analysis used to test the two variables used the Spearman rank test, as both datasets were not normally distributed.

The initial stage in data collection was that the respondents were given a consent form and given an explanation of the purpose and benefits of the study, as well as their rights (autonomy) as research subjects, and they were allowed to decide whether they would participate. The respondents were informed that their confidentiality would be protected. The data in this study were obtained with written consent from the respondents. Data was collected during June - July 2024. This study analyzed demographic data, analyzed respondent characteristics data, and analyzed each variable. The data will be presented using a frequency distribution table in the main variable analysis. The collected data is then calculated as the value of the score.

CODE OF HEALTH ETHICS

This study ~~was approved~~ by the Research Ethics Committee of STIKes Karsa Husada Garut, with approval number 00715/KEP STIKes Karsa Husada Garut/2024.

RESULTS

The study sample consisted of ~~mothers of patients~~ aged over 18 years, who had been diagnosed with heart failure for more than six months and were receiving outpatient care at the Polyclinic in Garut, totaling 105 participants. The respondents were categorized based on variables such as gender, age, highest level of education, occupation, marital status, duration of heart failure, NYHA classification, comorbidities, and family responsibilities.

Table 1. Frequency Distribution of Respondent Characteristics of Heart Failure in the Polyclinic in Garut

Characteristic	Frequency (*f*)	Percentage (%)
Gender		
Male	38	36,2
Female	67	63,8

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Age		
18-59 Years	59	56,2
>60 Years	46	43,8
Highest Level of Education		
Elementary School	61	58,1
Junior High School	22	21,0
Senior High School	16	15,2
College	6	5,7
Employment Status		
Housewife	55	52,4
Laborer	28	26,7
Civil Servant	6	5,7
Other	16	15,2
Married Status		
Married	82	78,1
Single	23	21,9
Length of Heart Failure		
<1 Years	56	53,3
1-2 Years	31	29,5
>2 Years	18	17,1
Klasifikasi NYHA		
Class I	18	17,1
Class II	67	63,8
Class III	17	16,2
Class IV	3	2,9
Comorbidity		
Any	58	55,2
None	47	44,8
Responsible Family		
Any	97	92,4
None	8	7,8

According to the data analysis presented in Table 4.1, the majority of respondents are female, comprising 63.8%. Regarding age distribution, the largest group of respondents falls within the 18-59 years range, representing 56.2%. In the last education category, most respondents have education up to elementary school level (58.1%). Based on the employment category, the majority of respondents worked as housewives (52.4%). Regarding marital status, most respondents were married (78.1%). Based on the length of time suffering from heart failure, most respondents experienced the disease for less than one year (53.3%). In terms of New York Heart Association (NYHA) classification, the majority of respondents belonged to Class II (63.8%). In terms of comorbidities, the majority of respondents suffered from hypertension, cholesterol, pulmonary tuberculosis, diabetes mellitus, gastritis, and Hernia Nucleus Pulposus (HNP) (55.2%). During treatment visits, most respondents were accompanied by family members (92.4%).

Table 2. Frequency Distribution of Respondents' Family Support at the Polyclinic in Garut

Family Support	Frequency (*f*)	Percentage (%)
Poor	5	4,7
Fair	15	14,3
Good	85	81,0

Based on the data presented in Table 2, 85 respondents (81.0%) received good family support. Meanwhile, respondents with poor family support were recorded as many as 5 people (4.7%).

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Table 3. Frequency Distribution of Respondents' Self-Care at the Polyclinic in Garut

Self-Care	Frequency (*f*)	Percentage (%)
Inadequate	12	11,4
Adequate	93	88,6

Based on the data presented in Table 3. as many as 93 respondents (88.6%) were classified as adequate self-care categories.

Table 4. Frequency Distribution of Respondents' Self-Care at the Polyclinic in Garut

Family Support	Self-Care				Total		*p-value*	*r*
	Inadequate		Adequate					
	n	%	n	%	n	%		
Deficient	4	3,8	1	1,0	5	4,8		
Adequate	7	6,7	8	7,6	15	14,3	0,000	0,680
Good	1	1,0	84	80,0	85	81,0		

Table 4 indicates that the majority of respondents received good family support (81.0%) and most of these individuals exhibited adequate self-care (80.0%). In contrast, of the respondents with low family support (4.8%), most had inadequate self-care (3.8%). In the moderate family support category (14.3%), respondents were almost equally divided between adequate and inadequate self-care. The Spearman Rank correlation test revealed a p-value of 0.000 ($p<0.05$) and a correlation coefficient of $r=0.680$, indicating a strong relationship between family support and self-care behaviors among heart failure patients at the polyclinic in Garut.

DISCUSSION

The findings indicated that the majority of heart failure patients received good family support, accounting for 81.0%, with only 4.7% reporting low family support. This is consistent with previous research, which shows that most heart failure patients benefit from strong family support (6). The family has an important role in creating an environment that supports the involvement of family members, especially by normalizing and contextualizing health conditions, including in dealing with chronic diseases (11). Support from family members enhances self-care management in patients with chronic diseases by focusing on the needs of patients, as well as providing full support to patients living with chronic diseases (12).

Treatment in patients with chronic diseases does not only depend on pharmacological therapy, but also requires support from psychosocial factors, one of which is family support (13). This contributes to the optimization of patient management, as family support is crucial in facilitating treatment success and enhancing the quality of life for patients (14). In heart failure patients, support from the family becomes indispensable, because it can help patients undergo the treatment process more optimally and consistently (10). Family support is positively associated with self-care behaviors in heart failure patients; the greater the family support, the more effective and consistent the patient's self-care behaviors tend to be (15). Strong family support plays a critical role in lowering morbidity and mortality rates among patients with heart disease, family involvement not only provides emotional support but also plays a role in strengthening patient self-management in controlling chronic diseases (16).

The results showed that most patients with heart failure had an adequate level of self-care, which amounted to 81.0%. This finding indicates that the majority of patients can carry out self-care actions according to their disease management needs. Self-care is a crucial component in the management of heart failure. Studies have demonstrated that self-care directly influences treatment outcomes and contributes to the reduction of symptoms in patients (17). Self-care in heart failure patients involves a naturalistic decision-making process, encompassing three key aspects: maintaining physiological stability (maintenance), enhancing symptom awareness, and addressing symptoms as they arise (management).

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These three components are interrelated and contribute to the successful management of chronic conditions in heart failure patients (18).

Family support and self-care management behaviors are correlated with the quality of life in heart failure patients, with higher levels of family support leading to improved patient quality of life (16). There is a correlation between family support, self-care management behaviors, and the quality of life in heart failure patients, with greater family support contributing to a better quality of life for the patient (1). Inadequate self-care management can lead to an increased recurrence rate in patients with heart failure (19). Effective self-care practices can assist individuals in preventing complications, and this process can be influenced by various factors, including knowledge, social support, self-efficacy, and physical activity (20). In addition to individual factors, the role of the family is an important component in supporting self-care in heart failure patients.

Family support is essential for helping patients adhere to the necessary restrictions, which in turn enhances the effectiveness of treatment and stabilizes the patient's condition. Beyond individual factors, the family's role significantly influences the self-care of heart failure patients. Given the numerous restrictions patients must observe, family support is crucial for ensuring the success of treatment and self-care. Involvement of the family as a motivational source has been demonstrated to have a positive effect, particularly in improving treatment adherence and empowering patients to manage their health independently (5).

The study found a positive association between family support and the self-care abilities of heart failure patients, with statistical analysis revealing a significant relationship characterized by a strong correlation ($p = 0.000$; $r = 0.680$). This is supported because patients with low family support (4.8%) the majority have inadequate self-care (3.8%). In moderate family support (14.3%), there was a balance between inadequate (6.7%) and adequate (7.6%) self-care. In contrast, patients with good family support (81.0%) mostly had adequate self-care (80.0%). Consistent with studies highlighting a significant and positive relationship between family support and self-care behavior in heart failure patients, the findings demonstrate that greater family support is associated with improved self-care behavior (6). This underscores the crucial role of family support in motivating patients to maintain consistency and independence in performing self-care activities, which are essential for effective heart failure management.

Nurses play a role in facilitating active family involvement by providing motivation and education, both during the patient's treatment in the hospital and in the self-care process at home (21). Optimal family support contributes to the emotional stability of patients by fostering a sense of security and comfort in carrying out self-care while undergoing treatment (22). Family support acts as a strategic effort in helping heart failure patients carry out optimal self-care, thus enabling families to provide appropriate responses to self-care behavior, so that patients are able to carry out self-care activities and follow treatment programs consistently (23).

CONCLUSION

~~The findings of this study reveal that the majority of heart failure patients at the Polyclinic in Garut City receive a high level of family support and exhibit adequate self-care behaviors. Statistical analysis confirmed~~The current study showed that there was a significant ~~and strong~~ correlation between family support and self-care behavior. These findings suggest that family support is a critical factor in enhancing patients' capacity to independently manage their self-care. Therefore, family involvement needs to be an integral part of the care strategy for heart failure patients to support successful, holistic disease management.

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All authors contributed to this manuscript, including conceptualization, literature and theory search, direction and guidance, and feedback on this manuscript.

CONFLICTS OF INTEREST

The authors declare no conflict of interest.

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2. Bukti konfirmasi review dan hasil review pertama

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The Relationship Between Family Support and Self-Care in Heart Failure Patients in Garut City: A Cross-sectional Study

Commented [RV1]: *Suggestion:* Consider slightly refining the location specificity if the findings are intended to have broader implications, perhaps: "The Relationship Between Family Support and Self-Care Among Heart Failure Patients: A Cross-sectional Study in Garut City, Indonesia." This maintains clarity while subtly broadening the perceived scope.

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ABSTRACT

Heart failure is a pathophysiological condition due to impaired heart function in pumping blood that is chronic and progressive, and contributes to high morbidity and mortality rates. Reducing these rates requires a treatment strategy that maintains the health and well-being of patients, one of which is through effective self-care management. In its implementation, the role of family is an important aspect as a source of non-medical support that can motivate patients to undergo treatment. This research aimed examine the relationship between family support and self-care practices among individuals with heart failure attending polyclinics in Garut City.This study employed a quantitative design using a cross-sectional approach and correlation analysis. A total of 105 participants were selected through purposive sampling. Data were collected using a family support questionnaire and the Self-Care of Heart Failure Index (SCHFI) version 7.2, and analyzed using the Spearman Rank correlation test. The findings indicated that most participants had family support and received the good category, and demonstrated adequate self-care practices. A statistically significant correlation was identified between family support and self-care behavior (p = 0.000; r = 0.680).

Commented [RV2]: *Suggestion:* Ensure consistent terminology. For instance, while "good category" for family support is mentioned, using terms like "high levels of family support" might align better with quantitative reporting conventions. Specify the version of the SCHFI used (v 7.2) directly in the methods description within the abstract for completeness.

The keywords "Dukungan Keluarga, Gagal Jantung, Manajemen Perawatan Diri, Penyakit Kronis, Perawatan Diri" should be translated to English for an English-language publication. Suggested English keywords: Family Support, Heart Failure, Self-Care Management, Chronic Disease, Self-Care.

Key Messages:

- Family support had a significant association with self-care behaviors of heart failure patients, with a strong correlation (p = 0.000; r = 0.680).
- Most patients received good family support and demonstrated adequate self-care, reflecting the important role of family in supporting chronic disease management.

GRAPHICAL ABSTRACT

INTRODUCTION

Heart failure is a condition in which the heart is unable to pump blood efficiently, resulting in poor circulation and inadequate oxygen supply to the body's organs, thereby impairing their optimal function (1). Hypertension and coronary artery disease are the primary causes of heart failure, with the latter involving the narrowing of the arteries that supply blood to the heart muscle due to the buildup of plaque (1). Cardiovascular diseases represent the primary cause of mortality worldwide, responsible for approximately 17.9 million deaths annually, which constitutes about 32% of all global deaths (2). In Indonesia, heart disease ranks as the second most common cause of mortality, with a reported prevalence rate of 1.5% (3).

To reduce the prevalence and mortality rates of heart failure, a comprehensive management approach is required, incorporating both pharmacological and non-pharmacological therapies. Management of heart failure must be done comprehensively by combining both approaches to achieve optimal results for patients Family involvement in the care of heart failure patients plays a crucial role in supporting the stability and maintenance of the patient's health status, it has been proven effective in increasing patient adherence to treatment regimens and increasing the patients' ability to monitor and manage their health conditions independently (5).

Commented [RV3]: Clarify the statement "family involvement... has been proven effective..." by briefly stating *how* it is effective (e.g., improving adherence, symptom management) as mentioned later in the discussion. The preliminary study findings provide a strong local rationale; consider briefly mentioning the specific gaps observed (e.g., knowledge gaps in symptom identification, diet adherence) to strengthen the justification for the current research

Family support in heart failure patients allows them to play an active role in increasing knowledge that supports health and helps patient adaptation in daily life, including attitudes, actions, and family acceptance, which is manifested in the form of services provided to family members suffering from heart failure (6). An individual's capacity for self-care encompasses the awareness and confidence required to achieve, maintain, or improve their overall health and well-being (7). Self-care is a fundamental component in the management of chronic diseases, involving a range of competencies, behaviors, and proactive measures performed by individuals to maintain and enhance their health (8).

An essential strategy in managing heart failure involves empowering patients to engage in effective self-care. Self-care in heart failure patients includes medication adherence, lifestyle changes, symptom monitoring, and management of symptoms that arise (9). Research shows the importance of implementing healthy living behaviors in heart failure patients in the form of symptom management, as well as determining the level of patient responsibility, apart from adherence to treatment (10). Based on the results of the preliminary study, it shows that 7 out of 10 patients do not know how to identify the signs of symptoms that appear, the diet that must be followed, and do not monitor their body weight. In addition, 3 other patients needed assistance in carrying out activities at home.

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In this context, healthcare professionals play a crucial role in assessing the level of family support and evaluating self-care practices among patients with heart failure. This is necessary to understand the patient's understanding and behavior to maintain physical stability, avoid behaviors that can worsen conditions, and detect possible worsening of heart failure. Building on this context, the present study aims to examine the association between family support and self-care behaviors among patients with heart failure attending a polyclinic in Garut.

METHODS

This study employed a quantitative approach with a cross-sectional design, involving a population of outpatients who had been diagnosed with heart failure at the Polyclinic in Garut City, totaling 141 patients. Inclusion criteria for the sample included individuals over 18 years of age, patients diagnosed with heart failure for more than six months, and those receiving outpatient care at the Polyclinic in Garut City. A purposive sampling technique was applied, resulting in a sample size of 105 participants.

Data collection was conducted using a family support questionnaire, which assessed four indicators: emotional support, instrumental support, informational support, and overall support, with a total of 15 questions on a Likert scale. Additionally, the Self-Care of Heart Failure Index (SCHFI) was employed for the self-care assessment, encompassing three dimensions: care, maintenance, and symptom perception and management, comprising 29 questions, this questionnaire has been tested for validity with the SCHFI instrument, namely with a construct validity value of 0.793 so that this instrument is declared valid. With subscales of Cronbach's α value in order, namely self-care management α = 0.790, symptom perception α = 0.790, and self-care management α = 0.705, it was found that all question items had r count (0.97) > r table, so that all question items were valid. The reliability of the SCHFI questionnaire was assessed using a test-retest method (stability), measured by the correlation coefficient between the initial trial and the subsequent one. The correlation values ranged from 0.73 to 0.92, indicating a positive and statistically significant relationship, thus confirming the reliability of the instrument. The analysis used to test the two variables used the Spearman rank test, as both datasets were not normally distributed.

The initial stage in data collection was that the respondents were given a consent form and given an explanation of the purpose and benefits of the study, as well as their rights (autonomy) as research subjects, and they were allowed to decide whether they would participate. The respondents were informed that their confidentiality would be protected. The data in this study were obtained with written consent from the respondents. Data was collected during June - July 2024. This study analyzed demographic data, analyzed respondent characteristics data, and analyzed each variable. The data will be presented using a frequency distribution table in the main variable analysis. The collected data is then calculated as the value of the score.

CODE OF HEALTH ETHICS

This study was approved by the Research Ethics Committee of STIKes Karsa Husada Garut, with approval number 00715/KEP STIKes Karsa Husada Garut/2024.

RESULTS

The study sample consisted of mothers of patients aged over 18 years, who had been diagnosed with heart failure for more than six months and were receiving outpatient care at the Polyclinic in Garut, totaling 105 participants. The respondents were categorized based on variables such as gender, age, highest level of education, occupation, marital status, duration of heart failure, NYHA classification, comorbidities, and family responsibilities.

Table 1. Frequency Distribution of Respondent Characteristics of Heart Failure in the Polyclinic in Garut

Characteristic	Frequency (*f*)	Percentage (%)
Gender		
Male	38	36,2
Female	67	63,8

Commented [RV4]: Explicitly state the scoring interpretation for the questionnaires (e.g., what score ranges correspond to "poor," "fair," "good" family support and "inadequate," "adequate" self-care). While construct validity and Cronbach's alpha values are mentioned for SCHFI, briefly mention if the family support questionnaire also underwent validity/reliability testing for this study or cite its established psychometric properties. Clarify if "mothers of patients" in the Results section refers to the patients themselves being mothers, or if it's a typo and should refer to the patient characteristics described (e.g., predominantly female)

Commented [RV5]: Ensure consistency in table formatting and terminology (e.g., "Klasifikasi NYHA" should be "NYHA Classification"). In Table 1, double-check the percentages for accuracy (e.g., ensure decimals use periods consistently, like 36.2% not "36,2"). When reporting the correlation (Table 4 and text), stating "a strong relationship" based on the r-value of 0.680 is appropriate. Provide context for the NYHA classification distribution (e.g., "The majority of participants (63.8%) were classified under NYHA Class II, indicating mild symptoms during ordinary physical activity.").

Commented [RV6]: ?

Commented [RV7]: These characteristic variables must also be explained in the research methods section.

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Age		
18-59 Years	59	56,2
>60 Years	46	43,8
Highest Level of Education		
Elementary School	61	58,1
Junior High School	22	21,0
Senior High School	16	15,2
College	6	5,7
Employment Status		
Housewife	55	52,4
Laborer	28	26,7
Civil Servant	6	5,7
Other	16	15,2
Married Status		
Married	82	78,1
Single	23	21,9
Length of Heart Failure		
<1 Years	56	53,3
1-2 Years	31	29,5
>2 Years	18	17,1
Klasifikasi NYHA		
Class I	18	17,1
Class II	67	63,8
Class III	17	16,2
Class IV	3	2,9
Comorbidity		
Any	58	55,2
None	47	44,8
Responsible Family		
Any	97	92,4
None	8	7,8

Commented [RV8]: ?

According to the data analysis presented in Table 4.1, the majority of respondents are female, comprising 63.8%. Regarding age distribution, the largest group of respondents falls within the 18-59 years range, representing 56.2%. In the last education category, most respondents have education up to elementary school level (58.1%). Based on the employment category, the majority of respondents worked as housewives (52.4%). Regarding marital status, most respondents were married (78.1%). Based on the length of time suffering from heart failure, most respondents experienced the disease for less than one year (53.3%). In terms of New York Heart Association (NYHA) classification, the majority of respondents belonged to Class II (63.8%). In terms of comorbidities, the majority of respondents suffered from hypertension, cholesterol, pulmonary tuberculosis, diabetes mellitus, gastritis, and Hernia Nucleus Pulposus (HNP) (55.2%). During treatment visits, most respondents were accompanied by family members (92.4%).

Table 2. Frequency Distribution of Respondents' Family Support at the Polyclinic in Garut

Family Support	Frequency (*f*)	Percentage (%)
Poor	5	4,7
Fair	15	14,3
Good	85	81,0

Commented [RV9]: merge into 1 then create a cross-sectional table with respondent characteristics. So that we can see the distribution of Family Support and Self-Care variables based on respondent characteristics.

Based on the data presented in Table 2, 85 respondents (81.0%) received good family support. Meanwhile, respondents with poor family support were recorded as many as 5 people (4.7%).

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Table 3. Frequency Distribution of Respondents' Self-Care at the Polyclinic in Garut

Self-Care	Frequency (*f*)	Percentage (%)
Inadequate	12	11,4
Adequate	93	88,6

Based on the data presented in Table 3. as many as 93 respondents (88.6%) were classified as adequate self-care categories.

Table 4. Frequency Distribution of Respondents' Self-Care at the Polyclinic in Garut

Family Support	Self-Care				Total		*p-value*	*r*
	Inadequate		Adequate					
	n	%	n	%	n	%		
Deficient	4	3,8	1	1,0	5	4,8		
Adequate	7	6,7	8	7,6	15	14,3	0,000	0,680
Good	1	1,0	84	80,0	85	81,0		

Table 4 indicates that the majority of respondents received good family support (81.0%) and most of these individuals exhibited adequate self-care (80.0%). In contrast, of the respondents with low family support (4.8%), most had inadequate self-care (3.8%). In the moderate family support category (14.3%), respondents were almost equally divided between adequate and inadequate self-care. The Spearman Rank correlation test revealed a p-value of 0.000 ($p<0.05$) and a correlation coefficient of $r=0.680$, indicating a strong relationship between family support and self-care behaviors among heart failure patients at the polyclinic in Garut.

DISCUSSION

The findings indicated that the majority of heart failure patients received good family support, accounting for 81.0%, with only 4.7% reporting low family support. This is consistent with previous research, which shows that most heart failure patients benefit from strong family support (6). The family has an important role in creating an environment that supports the involvement of family members, especially by normalizing and contextualizing health conditions, including in dealing with chronic diseases (11). Support from family members enhances self-care management in patients with chronic diseases by focusing on the needs of patients, as well as providing full support to patients living with chronic diseases (12).

Treatment in patients with chronic diseases does not only depend on pharmacological therapy, but also requires support from psychosocial factors, one of which is family support (13). This contributes to the optimization of patient management, as family support is crucial in facilitating treatment success and enhancing the quality of life for patients (14). In heart failure patients, support from the family becomes indispensable, because it can help patients undergo the treatment process more optimally and consistently (10). Family support is positively associated with self-care behaviors in heart failure patients; the greater the family support, the more effective and consistent the patient's self-care behaviors tend to be (15). Strong family support plays a critical role in lowering morbidity and mortality rates among patients with heart disease, family involvement not only provides emotional support but also plays a role in strengthening patient self-management in controlling chronic diseases (16).

The results showed that most patients with heart failure had an adequate level of self-care, which amounted to 81.0%. This finding indicates that the majority of patients can carry out self-care actions according to their disease management needs. Self-care is a crucial component in the management of heart failure. Studies have demonstrated that self-care directly influences treatment outcomes and contributes to the reduction of symptoms in patients (17). Self-care in heart failure patients involves a naturalistic decision-making process, encompassing three key aspects: maintaining physiological stability (maintenance), enhancing symptom awareness, and addressing symptoms as they arise (management).

Commented [RV10]: Strengthen the link between the specific findings and the implications. For example, after stating the correlation, elaborate briefly on *how* different types of family support (emotional, instrumental, informational – if assessed by the questionnaire) might contribute to the observed adequate self-care. Consider discussing potential limitations, such as the cross-sectional design (which precludes causal inference) or reliance on self-report measures. Acknowledging limitations adds depth to the interpretation. Explore the finding that even with moderate support, self-care levels were mixed; this could suggest other influencing factors worth mentioning for future research

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These three components are interrelated and contribute to the successful management of chronic conditions in heart failure patients (18).

Family support and self-care management behaviors are correlated with the quality of life in heart failure patients, with higher levels of family support leading to improved patient quality of life (16). There is a correlation between family support, self-care management behaviors, and the quality of life in heart failure patients, with greater family support contributing to a better quality of life for the patient (1). Inadequate self-care management can lead to an increased recurrence rate in patients with heart failure (19). Effective self-care practices can assist individuals in preventing complications, and this process can be influenced by various factors, including knowledge, social support, self-efficacy, and physical activity (20). In addition to individual factors, the role of the family is an important component in supporting self-care in heart failure patients.

Family support is essential for helping patients adhere to the necessary restrictions, which in turn enhances the effectiveness of treatment and stabilizes the patient's condition. Beyond individual factors, the family's role significantly influences the self-care of heart failure patients. Given the numerous restrictions patients must observe, family support is crucial for ensuring the success of treatment and self-care. Involvement of the family as a motivational source has been demonstrated to have a positive effect, particularly in improving treatment adherence and empowering patients to manage their health independently (5).

The study found a positive association between family support and the self-care abilities of heart failure patients, with statistical analysis revealing a significant relationship characterized by a strong correlation ($p = 0.000$; $r = 0.680$). This is supported because patients with low family support (4.8%) the majority have inadequate self-care (3.8%). In moderate family support (14.3%), there was a balance between inadequate (6.7%) and adequate (7.6%) self-care. In contrast, patients with good family support (81.0%) mostly had adequate self-care (80.0%). Consistent with studies highlighting a significant and positive relationship between family support and self-care behavior in heart failure patients, the findings demonstrate that greater family support is associated with improved self-care behavior (6). This underscores the crucial role of family support in motivating patients to maintain consistency and independence in performing self-care activities, which are essential for effective heart failure management.

Nurses play a role in facilitating active family involvement by providing motivation and education, both during the patient's treatment in the hospital and in the self-care process at home (21). Optimal family support contributes to the emotional stability of patients by fostering a sense of security and comfort in carrying out self-care while undergoing treatment (22). Family support acts as a strategic effort in helping heart failure patients carry out optimal self-care, thus enabling families to provide appropriate responses to self-care behavior, so that patients are able to carry out self-care activities and follow treatment programs consistently (23).

CONCLUSION

The findings of this study reveal that the majority of heart failure patients at the Polyclinic in Garut City receive a high level of family support and exhibit adequate self-care behaviors. Statistical analysis confirmed a significant and strong correlation between family support and self-care behavior. These findings suggest that family support is a critical factor in enhancing patients' capacity to independently manage their self-care. Therefore, family involvement needs to be an integral part of the care strategy for heart failure patients to support successful, holistic disease management.

Commented [RV11]: *Suggestion:* Briefly reiterate the primary finding (the positive association) before stating the implication. Consider adding a forward-looking statement, perhaps suggesting areas for future research (e.g., intervention studies based on these findings) or specific recommendations for clinical practice (e.g., incorporating family assessment into routine patient care)

FUNDING

The researcher would like to thank the research samples who have been willing to be respondents in this study, to the research site that has facilitated this research, and STIKes Karsa Husada Garut which has provided support in the form of academic and administrative facilities so that this research can be carried out properly.

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All authors contributed to this manuscript, including conceptualization, literature and theory search, direction and guidance, and feedback on this manuscript.

CONFLICTS OF INTEREST

The authors declare no conflict of interest.

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The Relationship Between Family Support and Self-Care in Heart Failure Patients : A Cross-sectional Study in Garut City, Indonesia

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ABSTRACT

Introduction: Heart failure is a pathophysiological condition due to impaired heart function in pumping blood that is chronic and progressive, and contributes to high morbidity and mortality rates. Reducing these rates requires a treatment strategy that maintains the health and well-being of patients, one of which is through effective self-care management. In its implementation, the role of family is an important aspect as a source of non-medical support that can motivate patients to undergo treatment. **Objectives:** This study aimed to analyze the relationship between family support and self-care practices among individuals with heart failure attending polyclinics in Garut City. **Methods:** A quantitative cross-sectional design was employed, involving 105 participants who were selected through purposive sampling. Data were collected using a family support questionnaire the Caregiver Contribution to Self-Care of Heart Failure Index version 2 (CC-SCHFI v.2), then The Spearman rank correlation test was used for data analysis. **Results and Discussion:** The results showed that most participants had high levels of family support (81%), and demonstrated moderate self-care practice (88,6%). There was a strong and significant positive correlation between family support and self-care behavior ($r = 0.680$; $p < 0.001$), suggesting that better family support is associated with improved self-care practices among heart failure patients. **Conclusion:** Family support significantly enhances self-care behavior in heart failure patients. Involving family members in disease management programs is essential to promote better health outcomes.

Key Messages:

- Family support had a significant association with self-care behaviors of heart failure patients, with a strong correlation ($p = 0.000$; $r = 0.680$).
- Most patients reported received high levels of family support and demonstrated adequate self-care, reflecting the important role of family in supporting chronic disease management.

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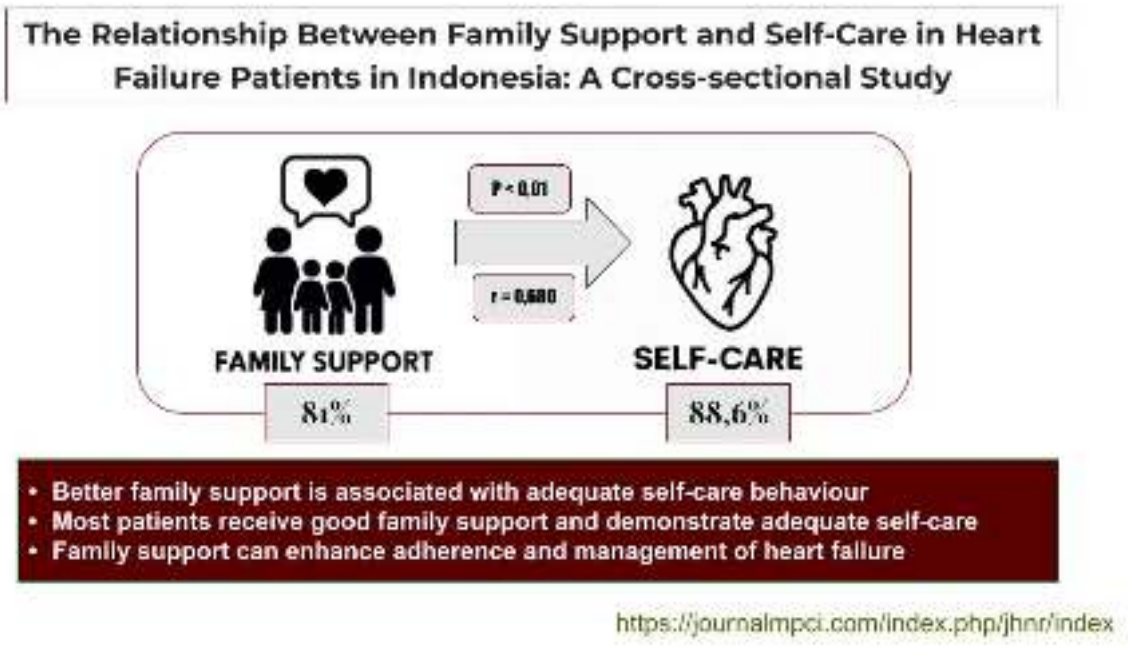
GRAPHICAL ABSTRACT



INTRODUCTION

Heart failure is a condition in which the heart is unable to pump blood efficiently, resulting in poor circulation and inadequate oxygen supply to the body's organs, thereby impairing their optimal function (1). Hypertension and coronary artery disease are the primary causes of heart failure, with the latter involving the narrowing of the arteries that supply blood to the heart muscle due to the buildup of plaque (1). Cardiovascular diseases represent the primary cause of mortality worldwide, responsible for approximately 17.9 million deaths annually, which constitutes about 32% of all global deaths (2). In Indonesia, heart disease ranks as the second most common cause of mortality, with a reported prevalence rate of 1.5% (3).

To reduce the prevalence and mortality rates of heart failure, a comprehensive management approach that combines pharmacological and non-pharmacological therapies is essential to achieve optimal patient outcomes. One key component of non-pharmacological management is family involvement, which plays a crucial role in supporting the stability and maintaining the stability of the patient's health status. Evidence suggests that family support significantly contributes to improving adherence to treatment regimens, enhancing patients' ability to recognise symptoms, and fostering independent self-care (4).

Family support in heart failure patients allows them to play an active role in increasing knowledge that supports health and helps patient adaptation in daily life, including attitudes, actions, and family acceptance, which is manifested in the form of services provided to family members suffering from heart failure (5). An individual's capacity for self-care encompasses the awareness and confidence required to achieve, maintain, or improve their overall health and well-being (6). Self-care is a fundamental component in the management of chronic diseases, involving a range of competencies, behaviours, and proactive measures performed by individuals to maintain and enhance their health (7).

An essential strategy in managing heart failure involves empowering patients to engage in effective self-care. This includes medication adherence, implementation of lifestyle modifications, routine monitoring of symptoms, and appropriate responses to any clinical changes that arise (8). Research shows the importance of these behaviours in improving symptom control and reducing complications, while also highlighting the role of patient responsibility in managing conditions beyond mere treatment compliance (9).

However, despite the recognized importance of self-care and family support, preliminary findings from the current study revealed gaps in behaviour and knowledge. Based on the results of the preliminary study, it shows that 7 out of 10 patients do not know how to identify the signs of symptoms that appear, the

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diet that must be followed, and do not monitor their body weight. In addition, 3 other patients needed assistance in carrying out activities at home. These findings indicate significant deficiencies in symptom recognition, dietary adherence, and functional independence domains that are strongly influenced by the presence or absence of adequate family support.

In this context, healthcare professionals play a crucial role in assessing the level of family support and evaluating self-care practices among patients with heart failure. This is necessary to understand the patient's understanding and behaviour to maintain physical stability, avoid behaviours that can worsen conditions, and detect possible worsening of heart failure. Building on this context, the present study aims to examine the association between family support and self-care behaviours among patients with heart failure attending a polyclinic in Garut.

METHODS

This study analyzed demographic data, analyzed respondent characteristics data, and analyzed each variable. The data will be presented using a frequency distribution table in the main variable analysis. The collected data is then calculated as the value of the score. This study employed a quantitative approach with a cross-sectional design, involving a population of outpatients who had been diagnosed with heart failure at the Polyclinic in Garut City, totaling 141 patients. Inclusion criteria for the sample included individuals over 18 years of age, patients diagnosed with heart failure for more than six months, and those receiving outpatient care at the Polyclinic in Garut City. A purposive sampling technique was applied, resulting in a sample size of 105 participants.

Data collection was conducted using two standardized questionnaires. The family support questionnaire, developed by Sampelan (2023) which assessed four indicators, including emotional support, instrumental support, informational support, and overall support, with a total of 15 items on a Likert scale (10). Scoring interpretation is categorized as poor (56%), fair (56-75%), and good (75-100%). The questionnaire has previously been validated and has shown reliability in a similar context.

The self-care behavior of heart failure patients was measured using the Caregiver Contributions to Self-Care of Heart Failure Index (CC-SCHFI) version 2 by Lainsamputty, covering maintenance, symptom perception, and management domains (11). Comprising 29 questions, and using a 5-point Likert scale. The instrument showed good validity (CVR = 0.793) and reliability (α = 0.705–0.790; test-retest r = 0.73–0.92). Scores were classified as adequate (>70) or inadequate (<70) and analyzed as ordinal data. The analysis used to test the two variables used the Spearman rank test, as both datasets were not normally distributed. Data were analyzed using SPSS version 25.

The characteristics of respondents analyzed in this study included gender, age, highest level of education, occupation, marital status, duration of heart failure, New York Heart Association (NYHA) classification, presence of comorbidities, and family responsibilities. These demographic data were collected using a structured questionnaire developed by the researchers and presented as frequency distributions.

The initial stage in data collection was that the respondents were given a consent form and given an explanation of the purpose and benefits of the study, as well as their rights (autonomy) as research subjects, and they were allowed to decide whether they would participate. The respondents were informed that their confidentiality would be protected. The data in this study were obtained with written consent from the respondents. Data was collected during June - July 2024.

CODE OF HEALTH ETHICS

This study was given favorable ethical opinion by the Research Ethics Committee of STIKes Karsa Husada Garut, with approval number 00715/KEP STIKes Karsa Husada Garut/2024.

RESULTS

The study sample consisted of patients aged over 18 years, who had been diagnosed with heart failure for more than six months and were receiving outpatient care at the Polyclinic in Garut, totalling 105 participants. The respondents were categorized according to variables such as gender, age, highest level of

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education, occupation, marital status, duration of heart failure, NYHA classification, comorbidities, and family responsibilities.

Table 1. Frequency Distribution of Respondent Characteristics of Heart Failure in the Polyclinic in Garut

Characteristic	Self-Care				N (%)
	Adequate		Inadequate		
	f	%	f	%	
Gender					
Male	30	28,6	8	7,6	39 (36,2)
Female	63	60	4	3,8	67 (63,8)
Age					
18-59 Years	51	48,6	8	7,6	59 (56,2)
>60 Years	42	40	4	3,8	46 (43,8)
Highest Level of Education					
Elementary School	55	52,4	6	5,7	61 (58,1)
Junior High School	17	16,2	6	4,8	22 (21)
Senior High School	15	14,3	1	1	16 (15,2)
College	6	5,7	0	0	6 (5,7)
Occupation					
Housewife	51	48,6	4	3,8	55 (52,4)
Laborer	22	21	6	5,7	28 (26,7)
Civil Servant	1	1	0	0	1 (1)
Farmer	8	7,6	1	1	9 (8,6)
Other	11	10,5	1	1	12 (11,4)
Marital Status					
Married	71	67,6	11	10,5	82 (78,1)
Single	22	21	1	1	23 (21,9)
Duration of Heart Failure					
<1 Years	49	46,7	7	6,7	56 (53,3)
1-2 Years	27	25,7	4	3,8	31 (29,5)
>2 Years	17	16,2	1	1	18 (17,1)
NYHA Classification					
Class I	15	14,3	3	2,9	18 (17,1)
Class II	58	55,2	9	8,6	67 (63,8)
Class III	17	16,2	0	0	17 (16,2)
Class IV	3	2,9	0	0	3 (2,9)
Comorbidities					
Any	55	52,4	3	2,9	58 (55,2)
None	38	36,2	9	8,6	47 (44,8)
Family Responsibilities					
Any	31	29,5	4	3,8	35 (33,3)
None	62	59	8	7,6	70 (66,7)

Based on the data in the table 1, respondents with the highest level of self-care (categorized as “adequate”) were predominantly female, accounting for 63 individuals or 60%, compared to 30 males (28.6%). The age group of 18–59 years showed a higher proportion of adequate self-care, with 51 individuals (48.6%), compared to those over 60 years. In terms of education, the majority of respondents with adequate self-care had only completed elementary school, totaling 55 individuals (52.4%), the highest among all educational levels.

Regarding occupation, housewives made up the largest group with adequate self-care, at 51 individuals (48.6%). Married respondents also demonstrated the highest percentage of adequate self-care, with 71 individuals (67.6%). Furthermore, those who had been living with heart failure for less than one year showed the highest proportion of adequate self-care, with 49 individuals (46.7%). According to the NYHA classification, respondents in Class II had the highest number with adequate self-care, reaching 58 individuals (55.2%). Respondents with comorbidities also made up a large portion of those with adequate self-care, totaling 55

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individuals (52.4%). Lastly, those without family responsibilities constituted the highest group in terms of adequate self-care, with 62 individuals (59%).

Table 2. Frequency Distribution of Respondents' Family Support at the Polyclinic in Garut

Family Support	Frequency (*f*)	Percentage (%)
Low	5	4,7
Enough	15	14,3
High	85	81,0

The data presented in Table 2, 85 respondents (81.0%) reported high levels of family support. Meanwhile, respondents with poor family support were recorded as many as 5 people (4.7%).

Table 3. Frequency Distribution of Respondents' Self-Care at the Polyclinic in Garut

Self-Care	Frequency (*f*)	Percentage (%)
Inadequate	12	11,4
Adequate	93	88,6

As presented in Table 3, as many as 93 respondents (88.6%) were classified as adequate self-care categories.

Table 4. Frequency Distribution of Respondents' Self-Care at the Polyclinic in Garut

Family Support	Self-Care				Total		*p-value*	*r*
	Adequate		Inadequate					
	f	%	f	%	f	%		
Low	3	2,9	2	1,9	5	4,8		
Enough	12	12,4	2	1,9	15	14,3	<0,001	0,680
High	77	73,3	8	7,6	85	81		

Based on the data presented in Table 4, the majority of respondents who demonstrated adequate self-care were those who received high levels of family support, amounting to 77 individuals or 73.3%. This was significantly higher compared to those with enough family support (12 individuals or 12.4%) and those with low support (only 3 individuals or 2.9%). The relationship between family support and self-care was found to be statistically significant, with a p-value of 0.000 and a correlation coefficient (r) of 0.680, indicating a strong positive correlation. This suggests that higher levels of family support are strongly associated with better self-care among respondents at the Polyclinic in Garut.

DISCUSSION

The findings indicated that the majority of heart failure patients reported that high levels of family support, accounting for 81.0%, with only 4.7% reporting low family support. This is consistent with previous research, which shows that most heart failure patients benefit from strong family support (5). The family has an important role in creating an environment that supports the involvement of family members, especially by normalizing and contextualizing health conditions, including in dealing with chronic diseases (12). In chronic diseases like heart failure, family support enhances self-care management by addressing patients' physical and emotional needs and providing continuous encouragement (13). Treatment in patients with chronic diseases does not only depend on pharmacological therapy, but also requires support from psychosocial factors, one of which is family support (14).

This contributes to the optimization of patient management, because the family support provided is in the form of emotional support by providing appreciation and praise by the family to the patient, as well as instrumental support by providing material provision assistance, as well as services provided to facilitate successful treatment and improve the quality of life for patients (15). In heart failure patients, support from the family becomes indispensable, because it can help patients undergo the treatment

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process more optimally and consistently (9). Family support is positively associated with self-care behaviors in heart failure patients, because family involvement in influencing patient behavior by providing positive emotional responses to increase patient confidence in optimizing patient self-care management, so that the greater the family support, the more effective and consistent the patient's self-care behaviors tend to be (16). Strong family support plays a critical role in lowering morbidity and mortality rates among patients with heart failure. Family involvement not only provides emotional support to the patient, also helps to reduce patient stress. In addition, information provided by the family in the form of knowledge about the disease and proper self-care management can strengthen patient self-management in controlling heart failure (10).

The results showed that most patients with heart failure had an adequate level of self-care, which amounted to 81.0%. This finding indicates that the majority of patients can carry out self-care actions according to their disease management needs. Self-care is a crucial component in the management of heart failure. Studies have demonstrated that self-care directly influences treatment outcomes and contributes to the reduction of symptoms in patients (17). Self-care in heart failure patients involves a naturalistic decision-making process, encompassing three key aspects: maintaining physiological stability (maintenance), enhancing symptom awareness, and addressing symptoms as they arise (management). These three components are interrelated and contribute to the successful management of chronic conditions in heart failure patients (18).

Family support and self-care management behaviors are correlated with the quality of life in heart failure patients, with higher levels of family support leading to improved patient quality of life (10). There is a correlation between family support, self-care management behaviors, and the quality of life in heart failure patients, with greater family support contributing to a better quality of life for the patient (1). Inadequate self-care management can lead to an increased recurrence rate in patients with heart failure (19). Effective self-care practices can assist individuals in preventing complications, and this process can be influenced by various factors, including knowledge, social support, self-efficacy, and physical activity (20). In addition to individual factors, the role of the family is an important component in supporting self-care in heart failure patients.

Family support is essential for helping patients adhere to the necessary restrictions, which in turn enhances the effectiveness of treatment and stabilizes the patient's condition. Beyond individual factors, family involvement is a key factor in supporting self-care among heart failure patients, significantly influencing adherence to treatment and lifestyle changes. Given the numerous restrictions patients must observe, family support is crucial for ensuring the success of treatment and self-care. Involvement of the family as a motivational source has been demonstrated to have a positive effect, particularly in improving treatment adherence and empowering patients to manage their health independently (4).

The study found a positive association between family support and the self-care abilities of heart failure patients, with statistical analysis revealing a significant relationship characterized by a strong correlation ($p = 0.000$; $r = 0.680$). This is supported because patients with low family support (4.8%) the majority have inadequate self-care (3.8%). In moderate family support (14.3%), there was a balance between inadequate (6.7%) and adequate (7.6%) self-care. In contrast, patients with high levels of family support (81.0%) mostly had adequate self-care (80.0%). Consistent with studies highlighting a significant and positive relationship between family support and self-care behavior in heart failure patients, the findings demonstrate that greater family support is associated with improved self-care behavior (5). This highlights how family support fosters patient motivation and autonomy in consistent self-care, which is essential for effective heart failure management.

Nurses play a role in facilitating active family involvement by providing motivation and education, both during the patient's treatment in the hospital and in the self-care process at home (21). Optimal family support contributes to the emotional stability of patients by fostering a sense of security and comfort in carrying out self-care while undergoing treatment (22). Family support acts as a strategic effort in helping heart failure patients carry out optimal self-care, thus enabling families to provide appropriate responses to self-care behavior, so that patients can carry out self-care activities and follow treatment programs consistently (23).

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This study has several limitations that warrant consideration. The cross-sectional design precludes any inference of causality between family support and self-care management, the observed associations cannot determine whether family support directly influences self-care. Furthermore, the use of self-reported instruments as the primary data collection method presents risks of measurement bias. Participants may inaccurately report their levels of family support or self-care behaviors due to limitations in recall, misinterpretation of questionnaire items, or the tendency to respond in a socially desirable manner. Such biases may affect the accuracy and validity of the findings. Future studies are encouraged to incorporate multiple data sources, including objective clinical indicators or family assessments, to enhance data validity and reliability and strengthen the robustness of the results. The finding that self-care behaviors were not uniformly adequate among participants with moderate family support suggests the presence of other contributing factors, such as health literacy, psychological status, or access to health services. Recognizing these limitations and unexplored variables adds depth to the analysis and offers direction for future investigations.

CONCLUSION

This study demonstrated a statistically significant association between family support and self-care behavior among heart failure patients at the Polyclinic in Garut City ($p = 0.000$; $r = 0.680$). The majority of patients who received high levels of family support were found to have adequate self-care capabilities. These results highlight the importance of family support as a major non-medical factor in chronic disease management, especially in terms of patient motivation, confidence, and consistency in self-care practices. Given the mixed self-care results seen among those with moderate support, it is possible that other variables, such as psychological state, health literacy, and access to healthcare, may affect patient behaviors. Future studies might concentrate on creating family-based interventions to improve self-care among heart failure sufferers in view of these results. Including regular family support assessment and organized family participation into patient care plans in clinical practice could help to enhance disease management results and the quality of life for this group.

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All authors contributed to this manuscript, including conceptualization, literature and theory search, direction and guidance, and feedback on this manuscript.

CONFLICTS OF INTEREST

The authors declare no conflict of interest.

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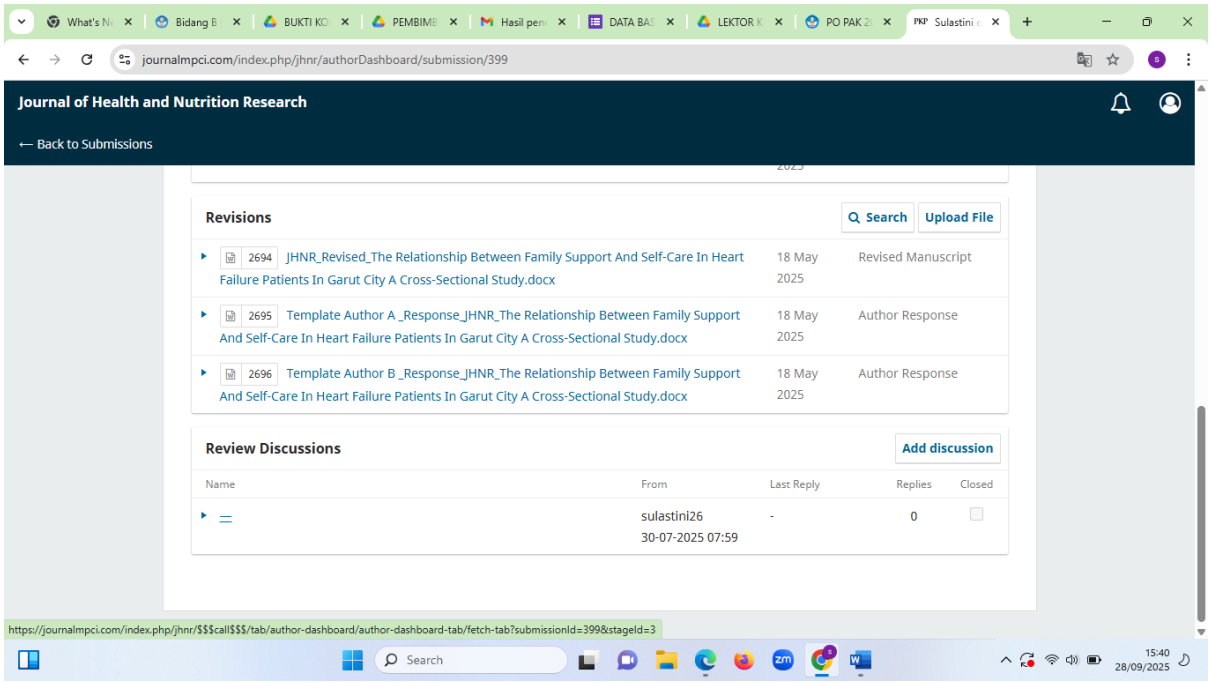
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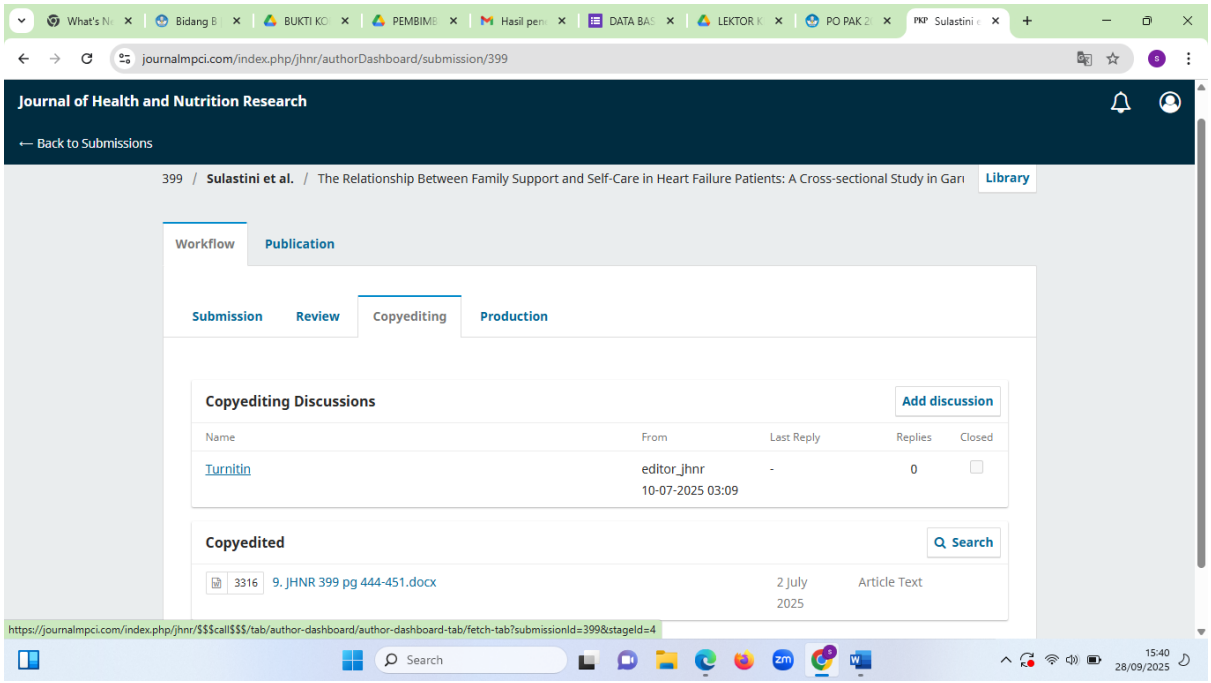
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Title Manuscript : The Relationship Between Family Support And Self-Care In Heart Failure Patients In Garut City: A Cross-Sectional Study

ID Manuscript : ID 399 JHNR

No.	Comment Reviewer A	Response
1	**Title** • Is the title clear, concise, and reflective of the study's content? **Completed**	We appreciate this suggestion and have reviewed and confirmed that the title *"The Relationship Between Family Support and Self-Care in Heart Failure Patients: A Cross-sectional Study in Garut City, Indonesia"* This title is clear, concise, and accurately reflects the study's scope and design.
2	**Abstract** • Please correct the keywords provided; they are non-English language which are off the Journal guidelines.	We are grateful for this observation and have revised the keywords in the Abstract to use English terms according to the journal's guidelines. As below: *"Chronic Illness, Family Support, Heart Failure, Self-Care, Self-Care Management"*
	• The current word count is below the word range required for the journal type, please check and follow the rule.	Thank you for your comment. We have revised and then expanded the abstract to meet the journal's required word count by adding more details to the Background, Methods, Results, and Conclusions sections, so that it fits within the specified range and the word count in the abstract totals 227 words. As below: *"Introduction: Heart failure is a pathophysiological condition due to impaired heart function in pumping blood that is chronic and progressive, and contributes to high morbidity and mortality rates. Reducing these rates requires a treatment strategy that maintains the health and well-being of patients, one of which is through effective self-care management. In its implementation, the role of family is an important aspect as a source of non-medical support that can motivate patients to undergo treatment. Objectives: This study aimed to analyze the relationship between family support and self-care practices among individuals with heart failure attending polyclinics in Garut City. Methods: A quantitative cross-sectional design was employed, involving 105 participants who were selected through purposive sampling. Data were collected using a family support questionnaire and the Self-Care of Heart Failure Index version 7.2 (SCHFI v7.2), then The Spearman rank correlation test was used for data analysis. Results and Discussion: The results showed that most participants had high levels of family support (81%), and demonstrated moderate self-care practice (88,6%). There was a strong and significant positive correlation between family support and self-care behavior ($r = 0.680$; $p < 0.001$), suggesting that better family support is associated with improved self-care practices among heart failure patients. Conclusion: Family support significantly enhances self-care behavior in heart failure patients. Involving family members in disease management programs is essential to promote better health outcomes."*

	• Please provide sign of each point of abstract according JHNR author guideline (e.g., Background/Introduction, Aims, Methods, Results and Discussion) and replace "finding indicated" with "results showed"	Thank you for your constructive comment. We have reformatted the abstract by adding the required headings (Background, Aims, Methods, Results, and Discussion) according to JHNR guidelines and replaced "finding indicated" with "results showed." As below: *"Introduction: Heart failure is a pathophysiological condition due to impaired heart function in pumping blood that is chronic and progressive, and contributes to high morbidity and mortality rates. Reducing these rates requires a treatment strategy that maintains the health and well-being of patients, one of which is through effective self-care management. In its implementation, the role of family is an important aspect as a source of non-medical support that can motivate patients to undergo treatment. Objectives: This study aimed to analyze the relationship between family support and self-care practices among individuals with heart failure attending polyclinics in Garut City. Methods: A quantitative cross-sectional design was employed, involving 105 participants who were selected through purposive sampling. Data were collected using a family support questionnaire and the Self-Care of Heart Failure Index version 7.2 (SCHFI v7.2), then The Spearman rank correlation test was used for data analysis. Results and Discussion: The results showed that most participants had high levels of family support (81%), and demonstrated moderate self-care practice (88,6%). There was a strong and significant positive correlation between family support and self-care behavior (r = 0.680; p < 0.001), suggesting that better family support is associated with improved self-care practices among heart failure patients. Conclusion: Family support significantly enhances self-care behavior in heart failure patients. Involving family members in disease management programs is essential to promote better health outcomes."*
	• Please use p < 0.001 or < 0.0001 to show a very small p value instead of 0.000 and it is interesting to know what is exactly the p value from the study instead of just 0.0000.	Thank you for your comment. We have updated all extremely small p-values in the Abstract to the format p < 0.001 and have inserted the exact p-values from our analyses in place of "0.000." As below: *"Results and Discussion: The results showed that most participants had high levels of family support (81%), and demonstrated moderate self-care practice (88,6%). There was a strong and significant positive correlation between family support and self-care behavior (r = 0.680; p < 0.001)"*
	• Please provide a brief conclusion	Thank you for your comment. We have added a concise concluding sentence to the Abstract summarizing the key implications of our findings for practice and future research. As below: *"Conclusion: Family support significantly enhances self-care behavior in heart failure patients. Involving family members in disease management programs is essential to promote better health outcomes."*
3	**Introduction** Completed: previous studies have been included in the current manuscript, and	Thank you for your appreciation.

	they are suitable and relevant to build up the current study background.	
4	**Method** • Please include the reference of a family support and SCHFI questionnaire.	Thank you for your helpful comment. In response, we have added the appropriate references for both the family support questionnaire and the Caregiver Contribution to Self-Care of Heart Failure Index (CC-SCHFI v2) in the Methods section and listed them in the References. As below: *"Data collection was conducted using two standardized questionnaires. The family support questionnaire, developed by Sampelan (2023) which assessed four indicators, including emotional support, instrumental support, informational support, and overall support, with a total of 15 items on a Likert scale (10)."* *"The self-care behavior of heart failure patients was measured using the Caregiver Contributions to Self-Care of Heart Failure Index (CC-SCHFI) version 2 by Lainsamputty, covering maintenance, symptom perception, and management domains (11). "*
	• If available, please include the Statistics software used for data analysis.	Thank you for your suggestion. In response, we have clarified in the Methods section that data analysis was conducted using SPSS version 25. This has now been explicitly stated to ensure transparency and reproducibility of the statistical procedures used in the study. The revised sentence in the manuscript reads as follows: *"Data were analyzed using SPSS version 25."* This information has been included and highlighted in the updated manuscript.
	• Please move 1-3 sentences of the end paragraph to the 1st paragraphs start.	Thank you for your comment. We have relocated the last three sentences of the Methods section's concluding paragraph to the very start of that section to improve clarity and logical flow. Us below: *"This study analyzed demographic data, analyzed respondent characteristics data, and analyzed each variable. The data will be presented using a frequency distribution table in the main variable analysis. The collected data is then calculated as the value of the score. This study employed a quantitative approach with a cross-sectional design, involving a population of outpatients who had been diagnosed with heart failure at the Polyclinic in Garut City, totaling 141 patients. Inclusion criteria for the sample included individuals over 18 years of age, patients diagnosed with heart failure for more than six months, and those receiving outpatient care at the Polyclinic in Garut City. A purposive sampling technique was applied, resulting in a sample size of 105 participants."*
	• Please replace "was approved" with "was given favorable ethical opinion".	Thank you for this suggestion. We have revised the ethics statement to read "was given favorable ethical opinion" in place of "was approved," following the journal's preferred terminology. Us below: *"This study was given favorable ethical opinion by the Research Ethics Committee of STIKes Karsa Husada Garut, with approval number 00715/KEP STIKes Karsa Husada Garut/2024."*

5	**Result** • Please replace "mothers of patients" with "patient mothers as clarity is required here; the method says the respondents are diagnosed heart failure patients.	We appreciate your identifying this typographical error. The phrase "mothers of patients" has been removed, and the Results section now reads: *"The study sample consisted of patients aged over 18 years, who had been diagnosed with heart failure for more than six months and were receiving outpatient care at the Polyclinic in Garut, totalling 105 participants."*
	• Please describe NYHA and others abbreviation at the very first time mentioned across manuscript.	In line with your recommendation, we have defined all abbreviations, such as NYHA (New York Heart Association functional classification) their first appearance in the manuscript to ensure clarity for readers. Us below: *"The characteristics of respondents analyzed in this study included gender, age, highest level of education, occupation, marital status, duration of heart failure, New York Heart Association (NYHA) classification, presence of comorbidities, and family responsibilities."*
	• Table 4.1 is not available in manuscript, please correct it.	Thank you for your comment. We have revised this discrepancy by renumbering the table formerly cited as "Table 4.1" to **Table 1**, and updated all in-text references accordingly. Us below: *"According to the data analysis presented in Table 1..."*
	• Please reduces the use of "based on", it has too many repetitions.	We appreciate this insightful suggestion. We have reviewed the manuscript and revised sentences throughout, particularly in the Results section, to minimize repeated use of "based on". Us below: *"The respondents were categorized according to.."* *"In terms of education..."* *"The data presented in Table 2"* *"As presented in Table 3"*
6	**Discussion** • This section was written properly but there are some sentences that possess similar points. Please write them concisely.	Thank you for your comment. Following your suggestion, we have refined the Discussion by condensing overlapping sentences, merging similar points, and removing redundancies to ensure a concise and clear presentation of our key findings. Us below: *"Family support is essential for helping patients adhere to the necessary restrictions, which in turn enhances the effectiveness of treatment and stabilizes the patient's condition. Beyond individual factors, family involvement is a key factor in supporting self-care among heart failure patients, significantly influencing adherence to treatment and lifestyle changes."* *"...Consistent with studies highlighting a significant and positive relationship between family support and self-care behavior in heart failure patients, the findings demonstrate that greater family support is associated with improved self-care behavior (6). This highlights how family support fosters patient motivation and autonomy in consistent self-care, which is essential for effective heart failure management."*

7	**Conclusion** • Please remove the 1st sentence and few words in the sentence 2 (marked strikethrough).	Thank you for your comment. Following your recommendation, we have removed the first sentence of the Conclusion and deleted the specified words from the second sentence to enhance clarity and conciseness. Us below: *"This study demonstrated a statistically significant association between family support and self-care behavior among heart failure patients at the Polyclinic in Garut City (p = 0.000; r = 0.680)."*
	• Please include recommendation for future study.	Thank you for this valuable suggestion. We have added a recommendation for future research focusing on intervention strategies to strengthen family support in heart failure care. Us below: *"Future studies might concentrate on creating family-based interventions to improve self-care among heart failure sufferers in view of these results. Including regular family support assessment and organized family participation into patient care plans in clinical practice could help to enhance disease management results and the quality of life for this group.."*
8	**References** • Completed.	We appreciate this confirmation. We have reviewed the References section and confirm that it is complete and compliant with journal guidelines.
9	**English Proficiency** • Some places require writing concisely but overall, the quality of writing is good.	We appreciate your positive feedback on the manuscript's overall clarity.
10	**Additional**	
	• The objective of this study was to investigate the correlation between self-care practices and family support in individuals with heart failure in Garut City.	We appreciate this clarification.
	• Big part of revision is necessary for the abstract, method and result. Please amend those sections accordingly.	In response to your guidance, we have comprehensively revised the Abstract (expanded content and restructured headings), Methods (relocated sentences, added citations, clarified terminology), and Results (updated narrative, corrected tables, minimized repetition) to meet journal standards.

Title Manuscript : The Relationship Between Family Support And Self-Care In Heart Failure Patients In Garut City: A Cross-Sectional Study

ID Manuscript : ID 399 JHNR

No.	Comment Reviewer B	Response
1	**Title** • Consider slightly refining the location specificity if the findings are intended to have broader implications, perhaps: "The Relationship Between Family Support and Self-Care Among Heart Failure Patients: A Cross-sectional Study in Garut City, Indonesia." This maintains clarity while subtly broadening the perceived scope.	We appreciate this suggestion. We have updated the title to "*The Relationship Between Family Support and Self-Care Among Heart Failure Patients: A Cross-sectional Study in Garut City, Indonesia*" to maintain clarity while subtly broadening its perceived scope.
2	**Abstract** • Ensure consistent terminology. For instance, while "good category" for family support is mentioned, using terms like "high levels of family support" might align better with quantitative reporting conventions.	We are grateful for this recommendation. We have replaced all instances of "good category of family support" with "high levels of family support" throughout the manuscript to ensure consistency and adherence to quantitative reporting conventions. As below: *"..The results showed that most participants had high levels of family support (81%).."*
	• Specify the version of the SCHFI used (v 7.2) directly in the methods description within the abstract for completeness.	We appreciate this suggestion. We have now indicated CC-SCHFI version 2 in the Methods subsection of the Abstract to clarify the exact instrument version used in this study. As below: *"Methods: A quantitative cross-sectional design was employed, involving 105 participants who were selected through purposive sampling. Data were collected using a family support questionnaire the Caregiver Contribution to Self-Care of Heart Failure Index version 2 (CC-SCHFI v.2),..."*
	• The keywords "Dukungan Keluarga, Gagal Jantung, Manajemen Perawatan Diri, Penyakit Kronis, Perawatan Diri" should be translated to English for an English-language publication. Suggested English keywords: Family Support, Heart Failure, Self-Care Management, Chronic Disease, Self-Care.	We appreciate this recommendation. We have translated the keywords into English and updated them to Chronic Illness, Family Support, Heart Failure, Self-Care, Self-Care Management in the Abstract.
3	**Introduction** • Clarify the statement "family involvement... has been proven effective..." by briefly stating how it is effective (e.g., improving adherence, symptom management) as mentioned later in the discussion.	Thank you for your comment. We appreciate this insightful suggestion. We have revised the Introduction to specify that family involvement has been shown to improve treatment adherence and symptom management. As below: *"To reduce the prevalence and mortality rates of heart failure, a comprehensive management approach that combines pharmacological and non-pharmacological therapies is essential to achieve optimal patient outcomes. One key component of non-pharmacological management is family involvement, which plays a crucial role in supporting the stability and maintaining the stability of the*

		patient's health status. Evidence suggests that family support significantly contributes to improving adherence to treatment regimens, enhancing patients' ability to recognise symptoms, and fostering independent self-care (4). *Family support in heart failure patients allows them to play an active role in increasing knowledge that supports health and helps patient adaptation in daily life, including attitudes, actions, and family acceptance, which is manifested in the form of services provided to family members suffering from heart failure (5). "*
	• The preliminary study findings provide a strong local rationale; consider briefly mentioning the specific gaps observed (e.g., knowledge gaps in symptom identification, diet adherence) to strengthen the justification for the current research.	Thank you for this suggestion. We have revised the Introduction to include detailed preliminary findings. As below: *"However, despite the recognized importance of self-care and family support, preliminary findings from the current study revealed gaps in behaviour and knowledge. Based on the results of the preliminary study, it shows that 7 out of 10 patients do not know how to identify the signs of symptoms that appear, the diet that must be followed, and do not monitor their body weight. In addition, 3 other patients needed assistance in carrying out activities at home. These findings indicate significant deficiencies in symptom recognition, dietary adherence, and functional independence domains that are strongly influenced by the presence or absence of adequate family support."*
4	**Method** • Explicitly state the scoring interpretation for the questionnaires (e.g., what score ranges correspond to "poor," "fair," "good" family support and "inadequate," "adequate" self-care).	Thank you for this suggestion. We appreciate this suggestion. Accordingly, we have added an explicit scoring interpretation in the Methods section under the Questionnaire. As below: *"Data collection was conducted using two standardized questionnaires. The family support questionnaire, developed by Sampelan (2023) which assessed four indicators, including emotional support, instrumental support, informational support, and overall support, with a total of 15 items on a Likert scale (10). Scoring interpretation is categorized as poor (56%), fair (56-75%), and good (75-100%)…."* *"The self-care behavior of heart failure patients was measured using the Caregiver Contributions to Self-Care of Heart Failure Index (CC-SCHFI) version 2 by Lainsamputty, covering maintenance, symptom perception, and management domains (11). Comprising 29 questions, and using a 5-point Likert scale. The instrument showed good validity (CVR = 0.793) and reliability (α = 0.705–0.790; test-retest r = 0.73–0.92). Scores were classified as adequate (>70) or inadequate (<70) and analyzed as ordinal data."*
	• While construct validity and Cronbach's alpha values are mentioned for SCHFI, briefly mention if the family support questionnaire also underwent validity/reliability testing for this study or cite its established psychometric properties.	Thank you for your thoughtful observation. In response to your comment, we have clarified in the Methods section that the family support questionnaire, developed by Sampelan (2023), had previously undergone validity and reliability testing in a similar context. We added a sentence to explicitly state this:

		"The questionnaire has previously been validated and has shown reliability in a similar context." This ensures that both instruments used in the study the SCHFI v7.2 and the family support questionnaire are clearly described as having established psychometric properties.
	• Clarify if "mothers of patients" in the Results section refers to the patients themselves being mothers, or if it's a typo and should refer to the patient characteristics described (e.g., predominantly female)	We apologize for the confusion. "Mothers of patients" was a typographical error. This phrase has been removed and the Results now accurately describe the study sample as "patients aged over 18 years…" without implying parental status.
5	**Result** • Ensure consistency in table formatting and terminology (e.g., "Klasifikasi NYHA" should be "NYHA Classification"). In Table 1, double-check the percentages for accuracy (e.g., ensure decimals use periods consistently, like 36.2% not "36,2").	We appreciate this recommendation. We have standardized the table formatting and terminology by renaming "Klasifikasi NYHA" to "NYHA Classification" as below: *"According to the NYHA classification, respondents in Class II had the highest number with adequate self-care, reaching 58 individuals (55.2%). "*
	• When reporting the correlation (Table 4 and text), stating "a strong relationship" based on the r-value of 0.680 is appropriate.	Thank you for your comment. We have expanded the abstract to meet the journal's required word count by adding further detail to the Background, Methods, Results, and Conclusion sections, bringing it within the specified range.
	• Provide context for the NYHA classification distribution (e.g., "The majority of participants (63.8%) were classified under NYHA Class II, indicating mild symptoms during ordinary physical activity.").	We appreciate this suggestion. We have added the following contextual sentence to the Results section: *"According to the NYHA classification, respondents in Class II had the highest number with adequate self-care, reaching 58 individuals (55.2%)."*
	• These characteristic variables must also be explained in the research methods section.	Thank you for your valuable suggestion. We have revised the Methods section to include a clear explanation of the respondent characteristics that were analyzed in this study. The revised paragraph now explicitly states the variables assessed (such as gender, age, education level, occupation, marital status, duration of heart failure, NYHA classification, comorbidities, and family responsibilities). This addition aims to improve the transparency and completeness of the methodology. As below: *"The characteristics of respondents analyzed in this study included gender, age, highest level of education, occupation, marital status, duration of heart failure, New York Heart Association (NYHA) classification, presence of comorbidities, and family responsibilities. These demographic data were collected using a structured questionnaire developed by the researchers and presented as frequency distributions."*
	• Merge into 1 then create a cross-sectional table with respondent characteristics. So that we can see the distribution of Family Support and Self-Care variables based on respondent characteristics.	Thank you for your insightful suggestion. In response to your comment, we have revised the Results section by merging the previously separate tables on respondent characteristics in table 1, family support and self-care into a single comprehensive cross-tabulation in table 4.

		This new table presents the distribution of Self-Care levels across various respondent characteristics (e.g., gender, age, education level, occupation, marital status, duration of illness, NYHA classification, comorbidities, and family responsibilities). This enhancement allows for a more integrated and meaningful interpretation of how respondent characteristics relate to both key variables. We believe this addition improves the clarity of the findings and supports a more comprehensive understanding of the patterns within the data. The revised table is now included and appropriately referenced in the text.
6	**Discussion** • Strengthen the link between the specific findings and the implications. For example, after stating the correlation, elaborate briefly on how different types of family support (emotional, instrumental, informational – if assessed by the questionnaire) might contribute to the observed adequate self-care.	Thank you very much for your valuable input. In response to your suggestion, we have revised the Discussion section to elaborate on how the different types of family support emotional, instrumental, and informational as assessed by our questionnaire, may have contributed to the observed levels of self-care among heart failure patients. As below: *"This contributes to the optimization of patient management, because the family support provided is in the form of emotional support by providing appreciation and praise by the family to the patient, as well as instrumental support by providing material provision assistance, as well as services provided to facilitate successful treatment and improve the quality of life for patients (14)."* *"Family support is positively associated with self-care behaviors in heart failure patients, because family involvement in influencing patient behavior by providing positive emotional responses to increase patient confidence in optimizing patient self-care management, so that the greater the family support, the more effective and consistent the patient's self-care behaviors tend to be (15)."* *"Strong family support plays a critical role in lowering morbidity and mortality rates among patients with heart failure. Family involvement not only provides emotional support to the patient, also helps to reduce patient stress. In addition, information provided by the family in the form of knowledge about the disease and proper self-care management can strengthen patient self-management in controlling heart failure (10)."*
	• Consider discussing potential limitations, such as the cross-sectional design (which precludes causal inference) or reliance on self-report measures. Acknowledging limitations adds depth to the interpretation. Explore the finding that even with moderate support, self-care levels were mixed; this could suggest other influencing factors worth mentioning for future research	Thank you for your thoughtful and constructive feedback. In response, we have revised the Discussion section to include a detailed paragraph addressing the limitations of the study. As below: *"This study has several limitations that warrant consideration. The cross-sectional design precludes any inference of causality between family support and self-care management, the observed associations cannot determine whether family support directly influences self-care. Furthermore, the use of self-reported instruments as the primary data collection method presents risks of measurement bias. Participants may inaccurately report their levels of family support or self-care behaviors due to*

		limitations in recall, misinterpretation of questionnaire items, or the tendency to respond in a socially desirable manner. Such biases may affect the accuracy and validity of the findings. Future studies are encouraged to incorporate multiple data sources, including objective clinical indicators or family assessments, to enhance data validity and reliability and strengthen the robustness of the results. The finding that self-care behaviors were not uniformly adequate among participants with moderate family support suggests the presence of other contributing factors, such as health literacy, psychological status, or access to health services. Recognizing these limitations and unexplored variables adds depth to the analysis and offers direction for future investigations."
7	**Conclusion** • Briefly reiterate the primary finding (the positive association) before stating the implication. Consider adding a forward-looking statement, perhaps suggesting areas for future research (e.g., intervention studies based on these findings) or specific recommendations for clinical practice (e.g., incorporating family assessment into routine patient care)	Thank you for your helpful suggestion. In response, we have revised the Conclusion as below: *"This study demonstrated a statistically significant association between family support and self-care behavior among heart failure patients at the Polyclinic in Garut City ($p = 0.000$; $r = 0.680$). The majority of patients who received high levels of family support were found to have adequate self-care capabilities. These results highlight the importance of family support as a major non-medical factor in chronic disease management, especially in terms of patient motivation, confidence, and consistency in self-care practices. Given the mixed self-care results seen among those with moderate support, it is possible that other variables, such as psychological state, health literacy, and access to healthcare, may affect patient behaviors. Future studies might concentrate on creating family-based interventions to improve self-care among heart failure sufferers in view of these results. Including regular family support assessment and organized family participation into patient care plans in clinical practice could help to enhance disease management results and the quality of life for this group."*

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The Relationship Between Family Support and Self-Care in Heart Failure Patients : A Cross-sectional Study in Garut City, Indonesia

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ABSTRACT

Introduction: Heart failure is a pathophysiological condition due to impaired heart function in pumping blood that is chronic and progressive, and contributes to high morbidity and mortality rates. Reducing these rates requires a treatment strategy that maintains the health and well-being of patients, one of which is through effective self-care management. In its implementation, the role of family is an important aspect as a source of non-medical support that can motivate patients to undergo treatment. **Objectives:** This study aimed to analyze the relationship between family support and self-care practices among individuals with heart failure attending polyclinics in Garut City. **Methods:** A quantitative cross-sectional design was employed, involving 105 participants who were selected through purposive sampling. Data were collected using a family support questionnaire and the Caregiver Contribution to Self-Care of Heart Failure Index version 2 (CC-SCHFI v.2), then The Spearman rank correlation test was used for data analysis. **Results and Discussion:** The results showed that most participants had high levels of family support (81%), and demonstrated moderate self-care practice (88,6%). There was a strong and significant positive correlation between family support and self-care behavior ($r = 0.680$; $p < 0.001$), suggesting that better family support is associated with improved self-care practices among heart failure patients. **Conclusion:** Family support significantly enhances self-care behavior in heart failure patients. Involving family members in disease management programs is essential to promote better health outcomes.

Key Messages:

- Family support had a significant association with self-care behaviors of heart failure patients, with a strong correlation ($p = 0.000$; $r = 0.680$).
- Most patients reported received high levels of family support and demonstrated adequate self-care, reflecting the important role of family in supporting chronic disease management.

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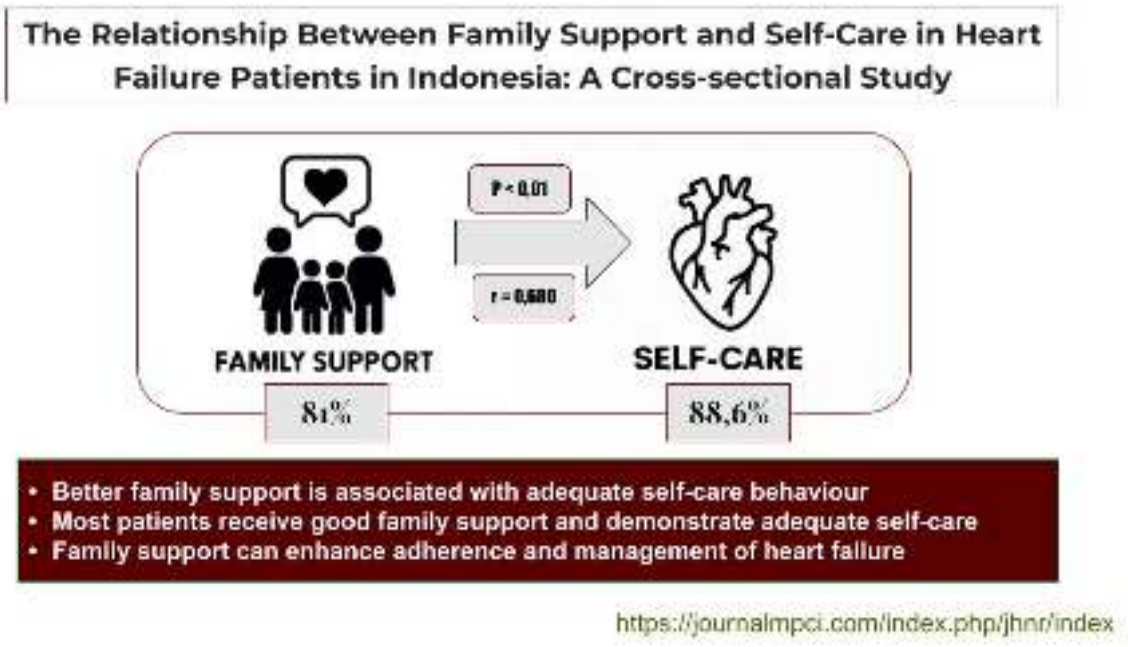
GRAPHICAL ABSTRACT



INTRODUCTION

Heart failure is a condition in which the heart is unable to pump blood efficiently, resulting in poor circulation and inadequate oxygen supply to the body's organs, thereby impairing their optimal function (1). Hypertension and coronary artery disease are the primary causes of heart failure, with the latter involving the narrowing of the arteries that supply blood to the heart muscle due to the buildup of plaque (1). Cardiovascular diseases represent the primary cause of mortality worldwide, responsible for approximately 17.9 million deaths annually, which constitutes about 32% of all global deaths (2). In Indonesia, heart disease ranks as the second most common cause of mortality, with a reported prevalence rate of 1.5% (3).

To reduce the prevalence and mortality rates of heart failure, a comprehensive management approach that combines pharmacological and non-pharmacological therapies is essential to achieve optimal patient outcomes. One key component of non-pharmacological management is family involvement, which plays a crucial role in supporting the stability and maintaining the stability of the patient's health status. Evidence suggests that family support significantly contributes to improving adherence to treatment regimens, enhancing patients' ability to recognise symptoms, and fostering independent self-care (4).

Family support in heart failure patients allows them to play an active role in increasing knowledge that supports health and helps patient adaptation in daily life, including attitudes, actions, and family acceptance, which is manifested in the form of services provided to family members suffering from heart failure (5). An individual's capacity for self-care encompasses the awareness and confidence required to achieve, maintain, or improve their overall health and well-being (6). Self-care is a fundamental component in the management of chronic diseases, involving a range of competencies, behaviours, and proactive measures performed by individuals to maintain and enhance their health (7).

An essential strategy in managing heart failure involves empowering patients to engage in effective self-care. This includes medication adherence, implementation of lifestyle modifications, routine monitoring of symptoms, and appropriate responses to any clinical changes that arise (8). Research shows the importance of these behaviours in improving symptom control and reducing complications, while also highlighting the role of patient responsibility in managing conditions beyond mere treatment compliance (9).

However, despite the recognized importance of self-care and family support, preliminary findings from the current study revealed gaps in behaviour and knowledge. Based on the results of the preliminary study, it shows that 7 out of 10 patients do not know how to identify the signs of symptoms that appear, the

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diet that must be followed, and do not monitor their body weight. In addition, 3 other patients needed assistance in carrying out activities at home. These findings indicate significant deficiencies in symptom recognition, dietary adherence, and functional independence domains that are strongly influenced by the presence or absence of adequate family support.

In this context, healthcare professionals play a crucial role in assessing the level of family support and evaluating self-care practices among patients with heart failure. This is necessary to understand the patient's understanding and behaviour to maintain physical stability, avoid behaviours that can worsen conditions, and detect possible worsening of heart failure. Building on this context, the present study aims to examine the association between family support and self-care behaviours among patients with heart failure attending a polyclinic in Garut.

METHODS

This study analyzed demographic data, analyzed respondent characteristics data, and analyzed each variable. The data will be presented using a frequency distribution table in the main variable analysis. The collected data is then calculated as the value of the score. This study employed a quantitative approach with a cross-sectional design, involving a population of outpatients who had been diagnosed with heart failure at the Polyclinic in Garut City, totaling 141 patients. Inclusion criteria for the sample included individuals over 18 years of age, patients diagnosed with heart failure for more than six months, and those receiving outpatient care at the Polyclinic in Garut City. A purposive sampling technique was applied, resulting in a sample size of 105 participants.

Data collection was conducted using two standardized questionnaires. The family support questionnaire, developed by Sampelan (2023) which assessed four indicators, including emotional support, instrumental support, informational support, and overall support, with a total of 15 items on a Likert scale (10). Scoring interpretation is categorized as poor (56%), fair (56-75%), and good (75-100%). The questionnaire has previously been validated and has shown reliability in a similar context.

The self-care behavior of heart failure patients was measured using the Caregiver Contributions to Self-Care of Heart Failure Index (CC-SCHFI) version 2 by Lainsamputty, covering maintenance, symptom perception, and management domains (11). Comprising 29 questions, and using a 5-point Likert scale. The instrument showed good validity (CVR = 0.793) and reliability (α = 0.705–0.790; test-retest r = 0.73–0.92). Scores were classified as adequate (>70) or inadequate (<70) and analyzed as ordinal data. The analysis used to test the two variables used the Spearman rank test, as both datasets were not normally distributed. Data were analyzed using SPSS version 25.

The characteristics of respondents analyzed in this study included gender, age, highest level of education, occupation, marital status, duration of heart failure, New York Heart Association (NYHA) classification, presence of comorbidities, and family responsibilities. These demographic data were collected using a structured questionnaire developed by the researchers and presented as frequency distributions.

The initial stage in data collection was that the respondents were given a consent form and given an explanation of the purpose and benefits of the study, as well as their rights (autonomy) as research subjects, and they were allowed to decide whether they would participate. The respondents were informed that their confidentiality would be protected. The data in this study were obtained with written consent from the respondents. Data was collected during June - July 2024.

CODE OF HEALTH ETHICS

This study was given favorable ethical opinion by the Research Ethics Committee of STIKes Karsa Husada Garut, with approval number 00715/KEP STIKes Karsa Husada Garut/2024.

RESULTS

The study sample consisted of patients aged over 18 years, who had been diagnosed with heart failure for more than six months and were receiving outpatient care at the Polyclinic in Garut, totalling 105 participants. The respondents were categorized according to variables such as gender, age, highest level of

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education, occupation, marital status, duration of heart failure, New York Heart Association (NYHA) classification, comorbidities, and family responsibilities.

Table 1. Frequency Distribution of Respondent Characteristics of Heart Failure in the Polyclinic in Garut

Characteristic	Self-Care				N (%)
	Adequate		Inadequate		
	f	%	f	%	
Gender					
Male	30	28,6	8	7,6	39 (36,2)
Female	63	60	4	3,8	67 (63,8)
Age					
18-59 Years	51	48,6	8	7,6	59 (56,2)
>60 Years	42	40	4	3,8	46 (43,8)
Highest Level of Education					
Elementary School	55	52,4	6	5,7	61 (58,1)
Junior High School	17	16,2	6	4,8	22 (21)
Senior High School	15	14,3	1	1	16 (15,2)
College	6	5,7	0	0	6 (5,7)
Occupation					
Housewife	51	48,6	4	3,8	55 (52,4)
Laborer	22	21	6	5,7	28 (26,7)
Civil Servant	1	1	0	0	1 (1)
Farmer	8	7,6	1	1	9 (8,6)
Other	11	10,5	1	1	12 (11,4)
Marital Status					
Married	71	67,6	11	10,5	82 (78,1)
Single	22	21	1	1	23 (21,9)
Duration of Heart Failure					
<1 Years	49	46,7	7	6,7	56 (53,3)
1-2 Years	27	25,7	4	3,8	31 (29,5)
>2 Years	17	16,2	1	1	18 (17,1)
NYHA Classification					
Class I	15	14,3	3	2,9	18 (17,1)
Class II	58	55,2	9	8,6	67 (63,8)
Class III	17	16,2	0	0	17 (16,2)
Class IV	3	2,9	0	0	3 (2,9)
Comorbidities					
Any	55	52,4	3	2,9	58 (55,2)
None	38	36,2	9	8,6	47 (44,8)
Family Responsibilities					
Any	31	29,5	4	3,8	35 (33,3)
None	62	59	8	7,6	70 (66,7)

Based on the data in the table 1, respondents with the highest level of self-care (categorized as “adequate”) were predominantly female, accounting for 63 individuals or 60%, compared to 30 males (28.6%). The age group of 18–59 years showed a higher proportion of adequate self-care, with 51 individuals (48.6%), compared to those over 60 years. In terms of education, the majority of respondents with adequate self-care had only completed elementary school, totaling 55 individuals (52.4%), the highest among all educational levels.

Regarding occupation, housewives made up the largest group with adequate self-care, at 51 individuals (48.6%). Married respondents also demonstrated the highest percentage of adequate self-care, with 71 individuals (67.6%). Furthermore, those who had been living with heart failure for less than one year showed the highest proportion of adequate self-care, with 49 individuals (46.7%). According to the NYHA classification, respondents in Class II had the highest number with adequate self-care, reaching 58 individuals (55.2%). Respondents with comorbidities also made up a large portion of those with adequate self-care, totaling 55

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individuals (52.4%). Lastly, those without family responsibilities constituted the highest group in terms of adequate self-care, with 62 individuals (59%).

Table 2. Frequency Distribution of Respondents' Family Support at the Polyclinic in Garut

Family Support	Frequency (*f*)	Percentage (%)
Low	5	4,7
Enough	15	14,3
High	85	81,0

The data presented in Table 2, 85 respondents (81.0%) reported high levels of family support. Meanwhile, respondents with poor family support were recorded as many as 5 people (4.7%).

Table 3. Frequency Distribution of Respondents' Self-Care at the Polyclinic in Garut

Self-Care	Frequency (*f*)	Percentage (%)
Inadequate	12	11,4
Adequate	93	88,6

As presented in Table 3, as many as 93 respondents (88.6%) were classified as adequate self-care categories.

Table 4. Frequency Distribution of Respondents' Self-Care at the Polyclinic in Garut

Family Support	Self-Care				Total		*p-value*	*r*
	Adequate		Inadequate					
	f	%	f	%	f	%		
Low	3	2,9	2	1,9	5	4,8		
Enough	12	12,4	2	1,9	15	14,3	<0,001	0,680
High	77	73,3	8	7,6	85	81		

Based on the data presented in Table 4, the majority of respondents who demonstrated adequate self-care were those who received high levels of family support, amounting to 77 individuals or 73.3%. This was significantly higher compared to those with enough family support (12 individuals or 12.4%) and those with low support (only 3 individuals or 2.9%). The relationship between family support and self-care was found to be statistically significant, with a p-value of 0.000 and a correlation coefficient (r) of 0.680, indicating a strong positive correlation. This suggests that higher levels of family support are strongly associated with better self-care among respondents at the Polyclinic in Garut.

DISCUSSION

The findings indicated that the majority of heart failure patients reported that high levels of family support, accounting for 81.0%, with only 4.7% reporting low family support. This is consistent with previous research, which shows that most heart failure patients benefit from strong family support (5). The family has an important role in creating an environment that supports the involvement of family members, especially by normalizing and contextualizing health conditions, including in dealing with chronic diseases (12). In chronic diseases like heart failure, family support enhances self-care management by addressing patients' physical and emotional needs and providing continuous encouragement (13). Treatment in patients with chronic diseases does not only depend on pharmacological therapy, but also requires support from psychosocial factors, one of which is family support (14).

This contributes to the optimization of patient management, because the family support provided is in the form of emotional support by providing appreciation and praise by the family to the patient, as well as instrumental support by providing material provision assistance, as well as services provided to facilitate successful treatment and improve the quality of life for patients (15). In heart failure patients, support from the family becomes indispensable, because it can help patients undergo the treatment

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process more optimally and consistently (9). Family support is positively associated with self-care behaviors in heart failure patients, because family involvement in influencing patient behavior by providing positive emotional responses to increase patient confidence in optimizing patient self-care management, so that the greater the family support, the more effective and consistent the patient's self-care behaviors tend to be (16). Strong family support plays a critical role in lowering morbidity and mortality rates among patients with heart failure. Family involvement not only provides emotional support to the patient, also helps to reduce patient stress. In addition, information provided by the family in the form of knowledge about the disease and proper self-care management can strengthen patient self-management in controlling heart failure (10).

The results showed that most patients with heart failure had an adequate level of self-care, which amounted to 81.0%. This finding indicates that the majority of patients can carry out self-care actions according to their disease management needs. Self-care is a crucial component in the management of heart failure. Studies have demonstrated that self-care directly influences treatment outcomes and contributes to the reduction of symptoms in patients (17). Self-care in heart failure patients involves a naturalistic decision-making process, encompassing three key aspects: maintaining physiological stability (maintenance), enhancing symptom awareness, and addressing symptoms as they arise (management). These three components are interrelated and contribute to the successful management of chronic conditions in heart failure patients (18).

Family support and self-care management behaviors are correlated with the quality of life in heart failure patients, with higher levels of family support leading to improved patient quality of life (10). There is a correlation between family support, self-care management behaviors, and the quality of life in heart failure patients, with greater family support contributing to a better quality of life for the patient (1). Inadequate self-care management can lead to an increased recurrence rate in patients with heart failure (19). Effective self-care practices can assist individuals in preventing complications, and this process can be influenced by various factors, including knowledge, social support, self-efficacy, and physical activity (20). In addition to individual factors, the role of the family is an important component in supporting self-care in heart failure patients.

Family support is essential for helping patients adhere to the necessary restrictions, which in turn enhances the effectiveness of treatment and stabilizes the patient's condition. Beyond individual factors, family involvement is a key factor in supporting self-care among heart failure patients, significantly influencing adherence to treatment and lifestyle changes. Given the numerous restrictions patients must observe, family support is crucial for ensuring the success of treatment and self-care. Involvement of the family as a motivational source has been demonstrated to have a positive effect, particularly in improving treatment adherence and empowering patients to manage their health independently (4).

The study found a positive association between family support and the self-care abilities of heart failure patients, with statistical analysis revealing a significant relationship characterized by a strong correlation ($p = 0.000$; $r = 0.680$). This is supported because patients with low family support (4.8%) the majority have inadequate self-care (3.8%). In moderate family support (14.3%), there was a balance between inadequate (6.7%) and adequate (7.6%) self-care. In contrast, patients with high levels of family support (81.0%) mostly had adequate self-care (80.0%). Consistent with studies highlighting a significant and positive relationship between family support and self-care behavior in heart failure patients, the findings demonstrate that greater family support is associated with improved self-care behavior (5). This highlights how family support fosters patient motivation and autonomy in consistent self-care, which is essential for effective heart failure management.

Nurses play a role in facilitating active family involvement by providing motivation and education, both during the patient's treatment in the hospital and in the self-care process at home (21). Optimal family support contributes to the emotional stability of patients by fostering a sense of security and comfort in carrying out self-care while undergoing treatment (22). Family support acts as a strategic effort in helping heart failure patients carry out optimal self-care, thus enabling families to provide appropriate responses to self-care behavior, so that patients can carry out self-care activities and follow treatment programs consistently (23).

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This study has several limitations that warrant consideration. The cross-sectional design precludes any inference of causality between family support and self-care management, the observed associations cannot determine whether family support directly influences self-care. Furthermore, the use of self-reported instruments as the primary data collection method presents risks of measurement bias. Participants may inaccurately report their levels of family support or self-care behaviors due to limitations in recall, misinterpretation of questionnaire items, or the tendency to respond in a socially desirable manner. Such biases may affect the accuracy and validity of the findings. Future studies are encouraged to incorporate multiple data sources, including objective clinical indicators or family assessments, to enhance data validity and reliability and strengthen the robustness of the results. The finding that self-care behaviors were not uniformly adequate among participants with moderate family support suggests the presence of other contributing factors, such as health literacy, psychological status, or access to health services. Recognizing these limitations and unexplored variables adds depth to the analysis and offers direction for future investigations.

CONCLUSION

This study demonstrated a statistically significant association between family support and self-care behavior among heart failure patients at the Polyclinic in Garut City ($p = 0.000$; $r = 0.680$). The majority of patients who received high levels of family support were found to have adequate self-care capabilities. These results highlight the importance of family support as a major non-medical factor in chronic disease management, especially in terms of patient motivation, confidence, and consistency in self-care practices. Given the mixed self-care results seen among those with moderate support, it is possible that other variables, such as psychological state, health literacy, and access to healthcare, may affect patient behaviors. Future studies might concentrate on creating family-based interventions to improve self-care among heart failure sufferers in view of these results. Including regular family support assessment and organized family participation into patient care plans in clinical practice could help to enhance disease management results and the quality of life for this group.

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CONFLICTS OF INTEREST

The authors declare no conflict of interest.

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Title Manuscript : The Relationship Between Family Support And Self-Care In Heart Failure Patients In Garut City: A Cross-Sectional Study

ID Manuscript : ID 399 JHNR

No.	Comment Reviewer A	Response
1	**Title** • Consider slightly refining the location specificity if the findings are intended to have broader implications, perhaps: "The Relationship Between Family Support and Self-Care Among Heart Failure Patients: A Cross-sectional Study in Garut City, Indonesia." This maintains clarity while subtly broadening the perceived scope.	We appreciate this suggestion. We have updated the title to "*The Relationship Between Family Support and Self-Care Among Heart Failure Patients: A Cross-sectional Study in Garut City, Indonesia*" to maintain clarity while subtly broadening its perceived scope.
2	**Abstract** • Ensure consistent terminology. For instance, while "good category" for family support is mentioned, using terms like "high levels of family support" might align better with quantitative reporting conventions.	We are grateful for this recommendation. We have replaced all instances of "good category of family support" with "high levels of family support" throughout the manuscript to ensure consistency and adherence to quantitative reporting conventions. As below: *"..The results showed that most participants had high levels of family support (81%).."*
	• Specify the version of the SCHFI used (v 7.2) directly in the methods description within the abstract for completeness.	We appreciate this suggestion. We have now indicated SCHFI version 7.2 in the Methods subsection of the Abstract to clarify the exact instrument version used in this study. As below: *"Methods: A quantitative cross-sectional design was employed, involving 105 participants who were selected through purposive sampling. Data were collected using a family support questionnaire the Caregiver Contribution to Self-Care of Heart Failure Index version 2 (CC-SCHFI v.2),..."*
	• The keywords "Dukungan Keluarga, Gagal Jantung, Manajemen Perawatan Diri, Penyakit Kronis, Perawatan Diri" should be translated to English for an English-language publication. Suggested English keywords: Family Support, Heart Failure, Self-Care Management, Chronic Disease, Self-Care.	We appreciate this recommendation. We have translated the keywords into English and updated them to Chronic Illness, Family Support, Heart Failure, Self-Care, Self-Care Management in the Abstract.
3	**Introduction** • Clarify the statement "family involvement... has been proven effective..." by briefly stating how it is effective (e.g., improving adherence, symptom management) as mentioned later in the discussion.	Thank you for your comment. We appreciate this insightful suggestion. We have revised the Introduction to specify that family involvement has been shown to improve treatment adherence and symptom management. As below: *"To reduce the prevalence and mortality rates of heart failure, a comprehensive management approach that combines pharmacological and non-pharmacological therapies is essential to achieve optimal patient outcomes. One key component of non-pharmacological management is family involvement, which plays a crucial role in supporting the stability and maintaining the stability of the*

		patient's health status. Evidence suggests that family support significantly contributes to improving adherence to treatment regimens, enhancing patients' ability to recognise symptoms, and fostering independent self-care (4). *Family support in heart failure patients allows them to play an active role in increasing knowledge that supports health and helps patient adaptation in daily life, including attitudes, actions, and family acceptance, which is manifested in the form of services provided to family members suffering from heart failure (5). "*
	• The preliminary study findings provide a strong local rationale; consider briefly mentioning the specific gaps observed (e.g., knowledge gaps in symptom identification, diet adherence) to strengthen the justification for the current research.	Thank you for this suggestion. We have revised the Introduction to include detailed preliminary findings. As below: *"However, despite the recognized importance of self-care and family support, preliminary findings from the current study revealed gaps in behaviour and knowledge. Based on the results of the preliminary study, it shows that 7 out of 10 patients do not know how to identify the signs of symptoms that appear, the diet that must be followed, and do not monitor their body weight. In addition, 3 other patients needed assistance in carrying out activities at home. These findings indicate significant deficiencies in symptom recognition, dietary adherence, and functional independence domains that are strongly influenced by the presence or absence of adequate family support."*
4	**Method** • Explicitly state the scoring interpretation for the questionnaires (e.g., what score ranges correspond to "poor," "fair," "good" family support and "inadequate," "adequate" self-care).	Thank you for this suggestion. We appreciate this suggestion. Accordingly, we have added an explicit scoring interpretation in the Methods section under the Questionnaire. As below: *"Data collection was conducted using two standardized questionnaires. The family support questionnaire, developed by Sampelan (2023) which assessed four indicators, including emotional support, instrumental support, informational support, and overall support, with a total of 15 items on a Likert scale (10). Scoring interpretation is categorized as poor (56%), fair (56-75%), and good (75-100%)…."* *"The self-care behavior of heart failure patients was measured using the Caregiver Contributions to Self-Care of Heart Failure Index (CC-SCHFI) version 2 by Lainsamputty, covering maintenance, symptom perception, and management domains (11). Comprising 29 questions, and using a 5-point Likert scale. The instrument showed good validity (CVR = 0.793) and reliability (α = 0.705–0.790; test-retest r = 0.73–0.92). Scores were classified as adequate (>70) or inadequate (<70) and analyzed as ordinal data."*
	• While construct validity and Cronbach's alpha values are mentioned for SCHFI, briefly mention if the family support questionnaire also underwent validity/reliability testing for this study or cite its established psychometric properties.	Thank you for your thoughtful observation. In response to your comment, we have clarified in the Methods section that the family support questionnaire, developed by Sampelan (2023), had previously undergone validity and reliability testing in a similar context. We added a sentence to explicitly state this:

		"The questionnaire has previously been validated and has shown reliability in a similar context." This ensures that both instruments used in the study the SCHFI v7.2 and the family support questionnaire are clearly described as having established psychometric properties.
	• Clarify if "mothers of patients" in the Results section refers to the patients themselves being mothers, or if it's a typo and should refer to the patient characteristics described (e.g., predominantly female)	We apologize for the confusion. "Mothers of patients" was a typographical error. This phrase has been removed and the Results now accurately describe the study sample as "patients aged over 18 years…" without implying parental status.
5	**Result** • Ensure consistency in table formatting and terminology (e.g., "Klasifikasi NYHA" should be "NYHA Classification"). In Table 1, double-check the percentages for accuracy (e.g., ensure decimals use periods consistently, like 36.2% not "36,2").	We appreciate this recommendation. We have standardized the table formatting and terminology by renaming "Klasifikasi NYHA" to "NYHA Classification" as below: *"According to the NYHA classification, respondents in Class II had the highest number with adequate self-care, reaching 58 individuals (55.2%). "*
	• When reporting the correlation (Table 4 and text), stating "a strong relationship" based on the r-value of 0.680 is appropriate.	Thank you for your comment. We have expanded the abstract to meet the journal's required word count by adding further detail to the Background, Methods, Results, and Conclusion sections, bringing it within the specified range.
	• Provide context for the NYHA classification distribution (e.g., "The majority of participants (63.8%) were classified under NYHA Class II, indicating mild symptoms during ordinary physical activity.").	We appreciate this suggestion. We have added the following contextual sentence to the Results section: *"According to the NYHA classification, respondents in Class II had the highest number with adequate self-care, reaching 58 individuals (55.2%)."*
	• These characteristic variables must also be explained in the research methods section.	Thank you for your valuable suggestion. We have revised the Methods section to include a clear explanation of the respondent characteristics that were analyzed in this study. The revised paragraph now explicitly states the variables assessed (such as gender, age, education level, occupation, marital status, duration of heart failure, NYHA classification, comorbidities, and family responsibilities). This addition aims to improve the transparency and completeness of the methodology. As below: *"The characteristics of respondents analyzed in this study included gender, age, highest level of education, occupation, marital status, duration of heart failure, New York Heart Association (NYHA) classification, presence of comorbidities, and family responsibilities. These demographic data were collected using a structured questionnaire developed by the researchers and presented as frequency distributions."*
	• Merge into 1 then create a cross-sectional table with respondent characteristics. So that we can see the distribution of Family Support and Self-Care variables based on respondent characteristics.	Thank you for your insightful suggestion. In response to your comment, we have revised the Results section by merging the previously separate tables on respondent characteristics in table 1, family support and self-care into a single comprehensive cross-tabulation in table 4.

		This new table presents the distribution of Self-Care levels across various respondent characteristics (e.g., gender, age, education level, occupation, marital status, duration of illness, NYHA classification, comorbidities, and family responsibilities). This enhancement allows for a more integrated and meaningful interpretation of how respondent characteristics relate to both key variables. We believe this addition improves the clarity of the findings and supports a more comprehensive understanding of the patterns within the data. The revised table is now included and appropriately referenced in the text.
6	**Discussion** • Strengthen the link between the specific findings and the implications. For example, after stating the correlation, elaborate briefly on how different types of family support (emotional, instrumental, informational – if assessed by the questionnaire) might contribute to the observed adequate self-care.	Thank you very much for your valuable input. In response to your suggestion, we have revised the Discussion section to elaborate on how the different types of family support emotional, instrumental, and informational as assessed by our questionnaire, may have contributed to the observed levels of self-care among heart failure patients. As below: *"This contributes to the optimization of patient management, because the family support provided is in the form of emotional support by providing appreciation and praise by the family to the patient, as well as instrumental support by providing material provision assistance, as well as services provided to facilitate successful treatment and improve the quality of life for patients (14)."* *"Family support is positively associated with self-care behaviors in heart failure patients, because family involvement in influencing patient behavior by providing positive emotional responses to increase patient confidence in optimizing patient self-care management, so that the greater the family support, the more effective and consistent the patient's self-care behaviors tend to be (15)."* *"Strong family support plays a critical role in lowering morbidity and mortality rates among patients with heart failure. Family involvement not only provides emotional support to the patient, also helps to reduce patient stress. In addition, information provided by the family in the form of knowledge about the disease and proper self-care management can strengthen patient self-management in controlling heart failure (10)."*
	• Consider discussing potential limitations, such as the cross-sectional design (which precludes causal inference) or reliance on self-report measures. Acknowledging limitations adds depth to the interpretation. Explore the finding that even with moderate support, self-care levels were mixed; this could suggest other influencing factors worth mentioning for future research	Thank you for your thoughtful and constructive feedback. In response, we have revised the Discussion section to include a detailed paragraph addressing the limitations of the study. As below: *"This study has several limitations that warrant consideration. The cross-sectional design precludes any inference of causality between family support and self-care management, the observed associations cannot determine whether family support directly influences self-care. Furthermore, the use of self-reported instruments as the primary data collection method presents risks of measurement bias. Participants may inaccurately report their levels of family support or self-care behaviors due to*

		limitations in recall, misinterpretation of questionnaire items, or the tendency to respond in a socially desirable manner. Such biases may affect the accuracy and validity of the findings. Future studies are encouraged to incorporate multiple data sources, including objective clinical indicators or family assessments, to enhance data validity and reliability and strengthen the robustness of the results. The finding that self-care behaviors were not uniformly adequate among participants with moderate family support suggests the presence of other contributing factors, such as health literacy, psychological status, or access to health services. Recognizing these limitations and unexplored variables adds depth to the analysis and offers direction for future investigations."
7	**Conclusion** • Briefly reiterate the primary finding (the positive association) before stating the implication. Consider adding a forward-looking statement, perhaps suggesting areas for future research (e.g., intervention studies based on these findings) or specific recommendations for clinical practice (e.g., incorporating family assessment into routine patient care)	Thank you for your helpful suggestion. In response, we have revised the Conclusion as below: *"This study demonstrated a statistically significant association between family support and self-care behavior among heart failure patients at the Polyclinic in Garut City ($p = 0.000$; $r = 0.680$). The majority of patients who received high levels of family support were found to have adequate self-care capabilities. These results highlight the importance of family support as a major non-medical factor in chronic disease management, especially in terms of patient motivation, confidence, and consistency in self-care practices. Given the mixed self-care results seen among those with moderate support, it is possible that other variables, such as psychological state, health literacy, and access to healthcare, may affect patient behaviors. Future studies might concentrate on creating family-based interventions to improve self-care among heart failure sufferers in view of these results. Including regular family support assessment and organized family participation into patient care plans in clinical practice could help to enhance disease management results and the quality of life for this group."*

Title Manuscript : The Relationship Between Family Support And Self-Care In Heart Failure Patients In Garut City: A Cross-Sectional Study

ID Manuscript : ID 399 JHNR

No.	Comment Reviewer A	Response
1	**Title** • Is the title clear, concise, and reflective of the study's content? **Completed**	We appreciate this suggestion and have reviewed and confirmed that the title *"The Relationship Between Family Support and Self-Care in Heart Failure Patients : A Cross-sectional Study in Garut City, Indonesia"* This title is clear, concise, and accurately reflects the study's scope and design.
2	**Abstract** • Please correct the keywords provided; they are non-English language which are off the Journal guidelines.	We are grateful for this observation and have revised the keywords in the Abstract to use English terms according to the journal's guidelines. As below: *"Chronic Illness, Family Support, Heart Failure, Self-Care, Self-Care Management"*
	• The current word count is below the word range required for the journal type, please check and follow the rule.	Thank you for your comment. We have revised and then expanded the abstract to meet the journal's required word count by adding more details to the Background, Methods, Results, and Conclusions sections, so that it fits within the specified range and the word count in the abstract totals 227 words. As below: *"Introduction: Heart failure is a pathophysiological condition due to impaired heart function in pumping blood that is chronic and progressive, and contributes to high morbidity and mortality rates. Reducing these rates requires a treatment strategy that maintains the health and well-being of patients, one of which is through effective self-care management. In its implementation, the role of family is an important aspect as a source of non-medical support that can motivate patients to undergo treatment. Objectives: This study aimed to analyze the relationship between family support and self-care practices among individuals with heart failure attending polyclinics in Garut City. Methods: A quantitative cross-sectional design was employed, involving 105 participants who were selected through purposive sampling. Data were collected using a family support questionnaire and the Self-Care of Heart Failure Index version 7.2 (SCHFI v7.2), then The Spearman rank correlation test was used for data analysis. Results and Discussion: The results showed that most participants had high levels of family support (81%), and demonstrated moderate self-care practice (88,6%). There was a strong and significant positive correlation between family support and self-care behavior ($r = 0.680$; $p < 0.001$), suggesting that better family support is associated with improved self-care practices among heart failure patients. Conclusion: Family support significantly enhances self-care behavior in heart failure patients. Involving family members in disease management programs is essential to promote better health outcomes."*

	• Please provide sign of each point of abstract according JHNR author guideline (e.g., Background/Introduction, Aims, Methods, Results and Discussion) and replace "finding indicated" with "results showed"	Thank you for your constructive comment. We have reformatted the abstract by adding the required headings (Background, Aims, Methods, Results, and Discussion) according to JHNR guidelines and replaced "finding indicated" with "results showed." As below: *"Introduction: Heart failure is a pathophysiological condition due to impaired heart function in pumping blood that is chronic and progressive, and contributes to high morbidity and mortality rates. Reducing these rates requires a treatment strategy that maintains the health and well-being of patients, one of which is through effective self-care management. In its implementation, the role of family is an important aspect as a source of non-medical support that can motivate patients to undergo treatment. Objectives: This study aimed to analyze the relationship between family support and self-care practices among individuals with heart failure attending polyclinics in Garut City. Methods: A quantitative cross-sectional design was employed, involving 105 participants who were selected through purposive sampling. Data were collected using a family support questionnaire and the Self-Care of Heart Failure Index version 7.2 (SCHFI v7.2), then The Spearman rank correlation test was used for data analysis. Results and Discussion: The results showed that most participants had high levels of family support (81%), and demonstrated moderate self-care practice (88,6%). There was a strong and significant positive correlation between family support and self-care behavior (r = 0.680; p < 0.001), suggesting that better family support is associated with improved self-care practices among heart failure patients. Conclusion: Family support significantly enhances self-care behavior in heart failure patients. Involving family members in disease management programs is essential to promote better health outcomes."*
	• Please use p < 0.001 or < 0.0001 to show a very small p value instead of 0.000 and it is interesting to know what is exactly the p value from the study instead of just 0.0000.	Thank you for your comment. We have updated all extremely small p-values in the Abstract to the format p < 0.001 and have inserted the exact p-values from our analyses in place of "0.000." As below: *"Results and Discussion: The results showed that most participants had high levels of family support (81%), and demonstrated moderate self-care practice (88,6%). There was a strong and significant positive correlation between family support and self-care behavior (r = 0.680; p < 0.001)"*
	• Please provide a brief conclusion	Thank you for your comment. We have added a concise concluding sentence to the Abstract summarizing the key implications of our findings for practice and future research. As below: *"Conclusion: Family support significantly enhances self-care behavior in heart failure patients. Involving family members in disease management programs is essential to promote better health outcomes."*
3	**Introduction** Completed: previous studies have been included in the current manuscript, and	Thank you for your appreciation.

	they are suitable and relevant to build up the current study background.	
4	**Method** • Please include the reference of a family support and SCHFI questionnaire.	Thank you for your helpful comment. In response, we have added the appropriate references for both the family support questionnaire and the Caregiver Contribution to Self-Care of Heart Failure Index (CC-SCHFI v2) in the Methods section and listed them in the References. As below: *"Data collection was conducted using two standardized questionnaires. The family support questionnaire, developed by Sampelan (2023) which assessed four indicators, including emotional support, instrumental support, informational support, and overall support, with a total of 15 items on a Likert scale (10)."* *"The self-care behavior of heart failure patients was measured using the Caregiver Contributions to Self-Care of Heart Failure Index (CC-SCHFI) version 2 by Lainsamputty, covering maintenance, symptom perception, and management domains (11). "*
	• If available, please include the Statistics software used for data analysis.	Thank you for your suggestion. In response, we have clarified in the Methods section that data analysis was conducted using SPSS version 25. This has now been explicitly stated to ensure transparency and reproducibility of the statistical procedures used in the study. The revised sentence in the manuscript reads as follows: *"Data were analyzed using SPSS version 25."* This information has been included and highlighted in the updated manuscript.
	• Please move 1-3 sentences of the end paragraph to the 1st paragraphs start.	Thank you for your comment. We have relocated the last three sentences of the Methods section's concluding paragraph to the very start of that section to improve clarity and logical flow. Us below: *"This study analyzed demographic data, analyzed respondent characteristics data, and analyzed each variable. The data will be presented using a frequency distribution table in the main variable analysis. The collected data is then calculated as the value of the score. This study employed a quantitative approach with a cross-sectional design, involving a population of outpatients who had been diagnosed with heart failure at the Polyclinic in Garut City, totaling 141 patients. Inclusion criteria for the sample included individuals over 18 years of age, patients diagnosed with heart failure for more than six months, and those receiving outpatient care at the Polyclinic in Garut City. A purposive sampling technique was applied, resulting in a sample size of 105 participants."*
	• Please replace "was approved" with "was given favorable ethical opinion".	Thank you for this suggestion. We have revised the ethics statement to read "was given favorable ethical opinion" in place of "was approved," following the journal's preferred terminology. Us below: *"This study was given favorable ethical opinion by the Research Ethics Committee of STIKes Karsa Husada Garut, with approval number 00715/KEP STIKes Karsa Husada Garut/2024."*

5	**Result** • Please replace "mothers of patients" with "patient mothers as clarity is required here; the method says the respondents are diagnosed heart failure patients.	We appreciate your identifying this typographical error. The phrase "mothers of patients" has been removed, and the Results section now reads: *"The study sample consisted of patients aged over 18 years, who had been diagnosed with heart failure for more than six months and were receiving outpatient care at the Polyclinic in Garut, totalling 105 participants."*
	• Please describe NYHA and others abbreviation at the very first time mentioned across manuscript.	In line with your recommendation, we have defined all abbreviations, such as NYHA (New York Heart Association functional classification) their first appearance in the manuscript to ensure clarity for readers. Us below: *"The characteristics of respondents analyzed in this study included gender, age, highest level of education, occupation, marital status, duration of heart failure, New York Heart Association (NYHA) classification, presence of comorbidities, and family responsibilities."*
	• Table 4.1 is not available in manuscript, please correct it.	Thank you for your comment. We have revised this discrepancy by renumbering the table formerly cited as "Table 4.1" to **Table 1**, and updated all in-text references accordingly. Us below: *"According to the data analysis presented in Table 1..."*
	• Please reduces the use of "based on", it has too many repetitions.	We appreciate this insightful suggestion. We have reviewed the manuscript and revised sentences throughout, particularly in the Results section, to minimize repeated use of "based on". Us below: *"The respondents were categorized according to.."* *"In terms of education..."* *"The data presented in Table 2"* *"As presented in Table 3"*
6	**Discussion** • This section was written properly but there are some sentences that possess similar points. Please write them concisely.	Thank you for your comment. Following your suggestion, we have refined the Discussion by condensing overlapping sentences, merging similar points, and removing redundancies to ensure a concise and clear presentation of our key findings. Us below: *"Family support is essential for helping patients adhere to the necessary restrictions, which in turn enhances the effectiveness of treatment and stabilizes the patient's condition. Beyond individual factors, family involvement is a key factor in supporting self-care among heart failure patients, significantly influencing adherence to treatment and lifestyle changes."* *"...Consistent with studies highlighting a significant and positive relationship between family support and self-care behavior in heart failure patients, the findings demonstrate that greater family support is associated with improved self-care behavior (6). This highlights how family support fosters patient motivation and autonomy in consistent self-care, which is essential for effective heart failure management."*

7	**Conclusion** • Please remove the 1st sentence and few words in the sentence 2 (marked strikethrough).	Thank you for your comment. Following your recommendation, we have removed the first sentence of the Conclusion and deleted the specified words from the second sentence to enhance clarity and conciseness. Us below: *"This study demonstrated a statistically significant association between family support and self-care behavior among heart failure patients at the Polyclinic in Garut City (p = 0.000; r = 0.680)."*
	• Please include recommendation for future study.	Thank you for this valuable suggestion. We have added a recommendation for future research focusing on intervention strategies to strengthen family support in heart failure care. Us below: *"Future studies might concentrate on creating family-based interventions to improve self-care among heart failure sufferers in view of these results. Including regular family support assessment and organized family participation into patient care plans in clinical practice could help to enhance disease management results and the quality of life for this group.."*
8	**References** • Completed.	We appreciate this confirmation. We have reviewed the References section and confirm that it is complete and compliant with journal guidelines.
9	**English Proficiency** • Some places require writing concisely but overall, the quality of writing is good.	We appreciate your positive feedback on the manuscript's overall clarity.
10	**Additional**	
	• The objective of this study was to investigate the correlation between self-care practices and family support in individuals with heart failure in Garut City.	We appreciate this clarification.
	• Big part of revision is necessary for the abstract, method and result. Please amend those sections accordingly.	In response to your guidance, we have comprehensively revised the Abstract (expanded content and restructured headings), Methods (relocated sentences, added citations, clarified terminology), and Results (updated narrative, corrected tables, minimized repetition) to meet journal standards.

4. Bukti konfirmasi artikel accepted

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Dear Authors

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We are pleased to inform you that your manuscript:

The Relationship Between Family Support and Self-Care in Heart Failure Patients : A Cross-sectional Study in Garut City, Indonesia

has been accepted for publication in **The Journal of Health and Nutrition Research (ISSN: 2829-9760).**

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Thank you for your kind contribution. On behalf of the Editors of The Journal of Health and Nutrition Research, we look forward to your continued contributions to the Journal

Kind regards

Bohari
Editor in Chief

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If you have any questions about this letter of accepted,
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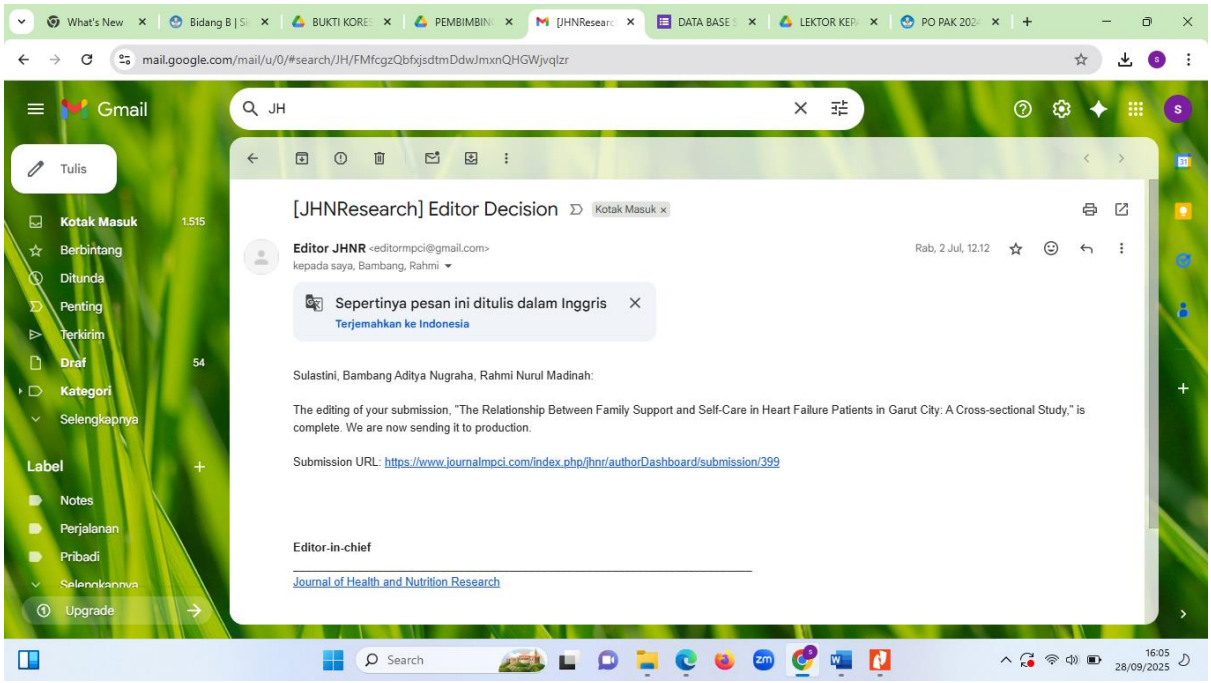
5. Bukti konfirmasi artikel published online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