

Family support and medication adherence as determinants of patient decision-making in heart failure symptom management

Hanifa Eka Rahmadani¹, Beti Kristinawati^{2*}

¹Bachelor Nursing Student, School of Nursing, Faculty of Health Science, Universitas Muhammadiyah Surakarta, Surakarta, Indonesia

²Medical Surgical Nursing Department, School of Nursing, Faculty of Health Science, Universitas Muhammadiyah Surakarta, Surakarta, Indonesia

ARTICLE INFO

Article history:

Received Oct 6, 2025

Revised Oct 14, 2025

Accepted Oct 20, 2025

Keywords:

Chronic Illness
Decisional Conflict
Family Involvement
Medication Adherence

ABSTRACT

Heart failure patients frequently experience difficulties in making decisions related to symptom management. This study aims to determine the relationship between family support and medication management behavior with heart failure patients' decision-making in managing clinical symptoms. This study uses a quantitative approach with a cross-sectional design and involves 270 heart failure patients at a regional hospital in Central Java in 2025. The instruments used include the Family Support Scale (FSS) questionnaire, the Adherence to Refill Medication Scale (ARMS), and the Decisional Conflict Scale (DCS). The research findings indicate that the majority of respondents received good family support (69.3%), exhibited high medication management behavior (52.6%), and were confident in making decisions regarding symptom management (89.3%). Statistical analysis showed a significant positive correlation between family support and decision-making ($\rho = 0.595$; $p = 0.000$), as well as between medication management behavior and decision-making ($\rho = 0.126$; $p = 0.039$). Family support and medication management behavior have a significant positive relationship with patients' confidence in making decisions regarding the management of their clinical symptoms. It is recommended to strengthen family support and improve medication management behavior to make it easier for patients to make decisions regarding the management of their disease symptoms. Healthcare professionals should involve family members in patient education and self-care programs, while hospital policymakers can develop family-based interventions to enhance patients' decision-making confidence.

This is an open-access article under the [CC BY-NC](https://creativecommons.org/licenses/by-nc/4.0/) license.



Corresponding Author:

Beti Kristinawati,

Department Keperawatan Medikal Bedah,

Universitas Muhammadiyah Surakarta,

Jl. A. Yani, Mendungan, Pabelan, Kec. Kartasura, Kabupaten Sukoharjo, Jawa Tengah 57162, Indonesia

Email: bk115@ums.ac.id

INTRODUCTION

Heart failure is a clinical syndrome characterized by symptoms such as shortness of breath, fatigue, and swelling, especially in the hands and feet, which arise from abnormalities in heart function or structure, thereby reducing the heart's pumping ability (McDonagh et al., 2021). Heart failure not only affects physical health but also the quality of life of those who suffer from it and is even a significant cause of mortality and morbidity worldwide (Tomasoni et al., 2019). The incidence of heart failure reaches approximately 1000 cases within 3-5 years for all age groups in Europe (McDonagh et al., 2021). The *World Health Organization (WHO)* reported 17.8 million deaths from cardiovascular disease in 2021, while in Indonesia, data from the Ministry of Health in 2023 recorded 650,000 deaths annually due to cardiovascular disease. According to data from the Indonesian Ministry of Health (Kemenkes RI) in 2022, heart disease is the most common sickness in Indonesia, accounting for almost 15.5 million patients. The high incidence of this highlights the importance of managing clinical symptoms in heart failure patients to improve their quality of life (Nursita & Pratiwi, 2020).

Success in managing symptoms depends not only on patient adherence to therapy but also on family support. There is a positive relationship between adequate family support and improved self-care behavior (Permana, 2021). Active family involvement can also help manage symptoms and strengthen the patient's ability to live independently (Damrongratnuwong et al., 2024). Effective and consistent family support can improve the quality of life of heart failure patients, considering that heart failure requires long-term management and carries a risk of recurrence.

Treatment management plays an important role in reducing rehospitalization rates. Non-adherent patients are at high risk of recurrence, rehospitalization, and even death (Khasanah et al., 2020; Garay et al., 2024). Treatment adherence aims to improve patients' clinical outcomes (Cadel et al., 2021). Patient adherence to treatment is often hindered by a lack of understanding of the prescribed drug therapy (Samsky et al., 2020). Therefore, treatment management plays a crucial role in ensuring patient adherence to the prescribed medication. Successful educational interventions and therapy management have been proven to reduce morbidity and mortality rates (Wilhelmsen & Eriksson, 2019).

The patient's decision-making process in managing clinical symptoms is critical, influencing the patient's quality of life and the success of therapy. Several factors, such as perceptions of symptoms, fear of a serious diagnosis, and gender bias, can influence this process (Andersson et al., 2022; Biddle et al., 2019). Several studies in Indonesia have examined aspects of family support and medication adherence among heart failure patients (Kristinawati et al., 2023; Pramesti & Kristinawati, 2024; Prameswari & Kristinawati, 2025). However, most of these studies focused on family support, intervention for improving medication adherence and barriers in family involvement, rather than on how family support and medication management behavior influence patients' decision-making.

This study aims to determine the relationship between family support and medication management behavior on decision-making regarding the management of clinical symptoms in heart failure patients.

RESEARCH METHOD

This research is a quantitative study with a cross-sectional design, involving 270 respondents at Poliklinik Jantung dan Pembuluh Darah RSUD Kabupaten Temanggung. RSUD Temanggung is a Type B district general hospital that frequently receives referrals from hospitals across neighboring districts. As a regional referral center, the hospital serves a diverse population of heart failure patients, making the sample representative of the broader heart failure population in Central Java.

The sampling technique used was purposive sampling, with respondents selected according to predetermined inclusion and exclusion criteria. The inclusion criteria were: (1)

patients with heart failure aged 40–75 years, (2) functional class NYHA I, II, III, or IV, (3) undergoing outpatient treatment at Poliklinik Jantung dan Pembuluh Darah RSUD Kabupaten Temanggung, (4) currently on prescribed heart failure medication, and (5) willing to participate, as indicated by signing informed consent. The exclusion criterion was patients who refused to participate. All patients who met the inclusion criteria and visited the clinic during the data collection period from June to July 2025 were included in this study.

This study uses the following measurement tools: a demographic questionnaire, the Family Support Scale (FSS), the Adherence to Refill Medication Scale (ARMS), and the Decisional Conflict Scale (DCS). The FSS is used to measure patients' family support. The Indonesian version of this questionnaire has been validated with item correlation coefficients ranging from 0.264 to 0.679 and reliability tested with a Cronbach's Alpha value of 0.854 (Zahira, 2020). Meanwhile, the ARMS is used to measure patients' medication management behavior. This questionnaire has been translated into Indonesian and has undergone validity testing, with all items found to be valid ($r > 0.250$) and a Cronbach's Alpha reliability of 0.849, indicating that the instrument is valid and reliable (Fitri, 2024). Then, the DCS questionnaire was used to measure patients' decision-making in symptom management. This instrument has been proven valid based on construct validity testing by O'Connor (2005), a significance of $p < 0.05$ and a Cronbach's Alpha reliability of 0.78 to 0.92. In this study, the DCS was used in the Indonesian version that had previously been used in research by Rochmawati et al. (2025). Scores from the FSS, ARMS, and DCS instruments were categorized according to the cut-off points established in previous validated studies that used the same Indonesian versions of these instruments.

The questionnaires were completed independently by the respondents, but the researchers provided assistance for those who had difficulty reading or understanding the items. Each respondent took approximately 20–30 minutes to complete all questionnaires. No pilot test was conducted because all instruments had previously been validated in Indonesian populations. Respondents with more than 10% missing responses were excluded from the final analysis.

Data were analyzed using univariate and bivariate statistical methods. Respondent characteristics were analyzed using univariate tests, while data normality tests were performed using the Kolmogorov-Smirnov method, which showed a significant value of < 0.05 , indicating that the data were not normally distributed. Therefore, the bivariate analysis uses the Spearman Rank correlation test. The interpretation of the correlation is based on the Spearman correlation coefficient (ρ) value, which ranges from -1 to +1, indicating the direction of the relationship between the two variables, whether positive or negative. The significance level is set at a p -value of < 0.05 . All analyses were performed using statistical software applications.

This research has obtained ethical approval from the Health Research Ethics Committee of the Faculty of Health Sciences, Muhammadiyah University of Surakarta, with the number: 1022/KEPK-FIK/IV/2025.

RESULTS AND DISCUSSIONS

The research results are presented in tables and descriptions that include the characteristics of the respondents and the relationships between the research variables.

Result

The research results are presented in the form of tables and descriptions, including the characteristics of the respondents and the relationships between the research variables. The characteristics of respondents with heart failure in this study are detailed in Table 1 below:

Characteristic	Frequency (n)	Percentage (%)
Age (Year)		
40-50	89	33.0

Characteristic	Frequency (n)	Percentage (%)
51-60	64	23.7
61-70	80	29.6
71-75	37	13.7
Gender		
Male	160	59.3
Female	110	40.7
Education		
No School	22	8.1
SD	73	27.0
SMP	67	24.8
SMA	90	33.3
Diploma II	2	0.7
Diploma III	4	1.5
Sarjana	12	4.4
Occupation		
Farmers	96	35.6
Ranchers	16	5.9
PNS	10	3.7
Artists	1	0.4
Teachers	5	1.9
TNI/Polri	2	0.7
Entrepreneurs	62	23.0
Others	78	28.9
Long Suffering (Year)		
<1	54	20.0
1-5	183	67.8
>5	33	12.2

Table 1 shows that most respondents are in the 40-50 age range, with a percentage of 33.0%. The majority of participants are male, with 160 respondents (59.3%). The highest level of education completed by the respondents was Senior High School (SMA) with a percentage of 33.3%, followed by Elementary School (SD) with a percentage of 27.0%, and Junior High School (SMP) with a percentage of 24.8%. In terms of occupation, the majority of respondents worked as farmers, with a percentage of 35.6%. Based on the duration of illness, most respondents were in the 1-5 year range, with 183 participants (67.8%), while the fewest were in the >5 year range, with 33 participants (12.2%).

Table 2. Frequency distribution of family support in heart failure patients

Family Support	f	%
Good	187	69.3
Enough	58	21.5
Not Good Enough	25	9.3

Table 2 shows that family support for heart failure patients undergoing treatment at a regional hospital in Central Java is divided into three categories: 187 respondents (69.3%) received good support, 58 respondents (21.5%) received sufficient support, and finally, 25 respondents (9.3%) received poor support.

Table 3. Frequency distribution of medication management behavior in heart failure patients

Medication Management Behavior	f	%
High	142	52.6
Medium	96	35.6
Low	32	11.9

Table 3 shows the medication management behavior of heart failure patients. Out of 142 respondents (52.6%), the majority exhibited high treatment management behavior, while 32 respondents (11.9%) demonstrated low treatment management behavior.

Table 4. Frequency distribution of decision-making regarding the management of clinical symptoms in heart failure patients

Decision-making	f	%
Certain	241	89.3
Hesitant	28	10.4
Uncertain	1	0.4

Table 4 shows the decision-making of heart failure patients. The majority of respondents were confident in their decisions, with 241 respondents (89.3%) feeling certain, while 28 respondents (10.45%) were hesitant about decisions regarding how to manage their clinical symptoms.

Table 5. The relationship between family support and decision-making regarding the management of clinical symptoms in heart failure patients

Family Support	Decision-making						Total	
	Certain		Hesitant		Uncertain		n	%
	n	%	n	%	n	%		
Good	185	98.9	2	1.1	0	0.0	187	100
Enough	56	96.6	2	3.4	0	0.0	58	100
Not Good Enough	0	0.0	24	96.0	1	4.0	25	100

ρ Spearman = 0,595
p-value = 0,000

Table 5 shows that out of 187 respondents who reported good family support, 185 respondents (98.9%) felt confident in decision-making, and two respondents (1.1%) felt hesitant. Based on the results of the Spearman correlation test, the correlation value obtained was $\rho=0.595$ with a significance value of $p=0.000$ ($p<0.05$). Thus, H_{01} is rejected and H_{a1} is accepted, which means there is a significant positive relationship between family support for patients and their decision-making regarding the management of their clinical symptoms. The higher the family support received, the more confident the patient is in making decisions regarding the management of their clinical symptoms.

Table 6. The relationship between medication management behavior and decision-making regarding how to manage clinical symptoms in heart failure patients

Medication Management Behavior	Decision-making						Total	
	Certain		Hesitant		Uncertain		n	%
	n	%	n	%	n	%		
High	131	92.3	11	7.7	0	0.0	142	100
Medium	85	88.5	10	10.4	1	1.0	96	100
Low	25	78.1	7	21.9	0	0.4	32	100

ρ Spearman = 0,126
p-value = 0,039

Table 6 shows the analysis of the relationship between heart failure patients' medication management behavior and decision-making regarding how to manage their clinical symptoms. It was found that out of 142 respondents with high medication management behavior, 131 people (92.3%) felt confident in their decision-making, while 11 people (7.7%) felt hesitant. The results of the Spearman correlation test showed a correlation value of $\rho=0.126$ with a significance value of $p=0.039$ ($p<0.05$). Although the strength of the relationship is in the weak category, statistically, the relationship is significant. Therefore, H_{02} is rejected and H_{a2} is accepted, which means there is a

relationship between the management behavior of patient treatment and decision-making regarding the management of their clinical symptoms.

Discussion

The results of this study indicate a correlation between family support and medication management behavior in the decision-making of heart failure patients regarding the management of their clinical symptoms. Most respondents in this study were aged 40-50 years, which aligns with the findings of Siregar et al (2024), who showed that the majority of heart failure patients fall within this age range. This finding is also supported by data from the Korea National Health Insurance Database (2024), which reports that the prevalence of heart failure is partially within the 40-49 age group. The majority of respondents in this study were male. This is consistent with the findings of Lecoeur et al. (2023), who stated that the incidence of heart failure in young adults is highest among men aged 36-50 years. Men have a higher tendency to experience cardiovascular disease, which is commonly associated with unhealthy lifestyles such as smoking. Someone who smokes has about a 1.3 times higher risk of heart failure compared to those who do not smoke (Priandani et al., 2024).

The majority of respondents have a high school level of education. This finding aligns with Prameswari & Kristinawati (2025), who stated that the majority of heart failure patients have a high school level of education. Education influences the quality of life of heart failure patients. The higher the level of education a heart failure patient has, the higher their quality of life (Putri et al., 2023). These research results also show that the majority of respondents work as farmers. This study aligns with research by Febtrina & Malfasari (2018), which states that the majority of heart failure patients work as farmers, traders, drivers, and laborers. Heart failure does not discriminate based on job background. Heavy and continuous work can increase the heart's workload, making it highly susceptible to health problems, especially in the cardiovascular system (Priandani et al., 2024).

Based on the data collected, the majority of patients have been suffering from the disease for 1-5 years. This finding is consistent with Muliantino et al. (2025) who stated that most patients develop heart failure within 1-5 years. In a study conducted by Pramesti & Kristinawati (2024) It was also found that the majority of patients developed heart failure within ≤ 5 years. The longer someone suffers from heart failure, the greater the likelihood of a decline in quality of life, such as being unable to perform their previous roles. However, the length of time suffering from the illness can also add to the patient's experience in dealing with their clinical symptoms (Haryati et al., 2020). The duration of heart failure did not show a significant correlation with patients' decision-making ability. However, patients who had lived longer with the condition tended to report greater familiarity with their symptoms and treatment routines, which may indirectly improve their confidence in making decisions.

Family support in this study falls into the good category, consistent with the research by Anggia et al. (2024) which states that almost all heart failure patients receive good family support. Previous research by Damrongratnuwong et al. (2024) and Permana (2021). Also showed similar results, emphasizing the role of family support in improving self-care behaviors and symptom management (Permana, 2021). The consistency of these results indicates that active family support remains a key factor in the context of chronic illness. Then, this study suggests that the higher the family support received, the more confident patients are in making decisions regarding the management of their clinical symptoms. This is supported by the concept of shared decision-making, where family members act as supporters in strengthening the patient's self-efficacy. This finding expands on the research results (Pramesti & Kristinawati, 2024) That confirms the relationship between family support and self-efficacy by adding a new aspect: decision-making confidence. Thus, family support influences patients' self-care behavior and self-efficacy and their decision-making in managing their clinical symptoms.

The research conducted by Kristinawati et al. (2024) revealed that families of heart failure patients experience various psychological changes, such as anxiety, fatigue, and fear, due to the patient's deteriorating condition. These psychological changes have the potential to affect the quality of support provided by the family (Kristinawati et al., 2024). When families are able to manage these psychological changes well, the support provided is optimal, thus strengthening the patient's confidence in making decisions regarding the management of their clinical symptoms. Thus, the findings of this study expand on previous research results that family support as a determinant of patient decision-making in managing symptoms cannot be separated from the psychological condition of the family caring for the patient.

The management behavior of patients' medication in this study was classified as high. This finding is consistent with Oktavina et al. (2023) who stated that heart failure patients tend to have high levels of medication adherence. Conversely, research by Khasanah et al. (2020) indicates that medication non-adherence increases the risk of relapse and re-hospitalization. The challenges of medication adherence in the study conducted by Kristinawati et al. (2023) can be minimized with tele-motivational interviewing interventions. This study expands on previous research findings by demonstrating a positive relationship between medication management behavior and decision-making related to the clinical management of patients' symptoms. The higher the management behavior of their treatment, the more confident they are in making decisions about managing their clinical symptoms. Thus, the results of this study not only reinforce previous studies on the importance of treatment adherence but also provide new findings that medication management behavior plays a role not only in the risk of rehospitalization but also in patients' decision-making process for managing their clinical symptoms.

The findings of this study highlight the critical role of family support in facilitating patients' confidence in decision-making. Healthcare professionals can strengthen family support by involving family members in patient education, medication counseling, and follow-up consultations. Structured programs that provide families with practical knowledge about symptom monitoring, medication adherence, and communication with healthcare providers could enhance their ability to assist patients in daily decision-making. Similar approaches have been successfully implemented in chronic disease management programs, where family involvement significantly improves patients' confidence and autonomy. Interestingly, a small proportion of patients with high family support still reported hesitation in making independent decisions. This may be related to cultural norms that prioritize family consensus over individual autonomy, particularly in collectivist societies such as Indonesia. In such contexts, patients may defer decisions to family members out of respect or fear of making the wrong choice. Additionally, excessive protective behavior from family members may unintentionally reduce patients' self-confidence. This finding suggests that while family support is essential, it should be balanced with strategies that promote patients' sense of agency and shared decision-making with both families and healthcare providers.

CONCLUSION

This study shows a positive and significant relationship between family support and medication management behavior in decision-making in managing clinical symptoms of heart failure patients. Patients who receive good family support are more confident in making decisions regarding the management of their symptoms. Additionally, patients with high medication management behavior tend to be more confident in making decisions about managing their symptoms. These findings are consistent with the principles of social support theory and previous studies showing that emotional and instrumental support from family members can enhance patients' self-efficacy and decision-making capacity. In practical terms, healthcare professionals should actively involve family members in patient education, medication counseling, and treatment discussions to strengthen patient confidence and encourage shared decision-making. Nursing interventions should focus on empowering both patients and families through structured education programs

that emphasize medication adherence, symptom monitoring, and communication within the family. This study was limited to a single Type B referral hospital using a cross-sectional design, which may restrict the generalizability and causal interpretation of the findings. Future research should include multi-center studies with longitudinal approaches to explore causal relationships and identify additional psychosocial factors influencing decision-making among heart failure patients.

Overall, these findings reinforce the importance of family-centered approaches in chronic disease management and provide a theoretical and practical basis for developing interventions that strengthen patients' confidence and autonomy in managing heart failure.

References

- Andersson, J., Jakobsson, S., Rejnö, Å., Hansson, P., Nielsen, S. J., & Björck, L. (2022). Decision-Making in Seeking Emergency Care for Stroke Symptoms. *Stroke: Vascular and Interventional Neurology*, 2(6), 1-7. <https://doi.org/10.1161/svin.122.000376>
- Anggia, T. R., Waluya, N., & Erlina, L. (2024). Hubungan Dukungan Keluarga dengan Kualitas Hidup Pasien Gagal Jantung Kongestif di Poliklinik Jantung RSUD Jawa Barat. *Medical-Surgical Journal of Nursing Research Anggia, et.Al*, 2(2). <https://doi.org/https://doi.org/10.70331/jpkmb.v2i2.37>
- Cadel, L., Cimino, S. R., von den Baumen, T. R., James, K. A., McCarthy, L., & Guilcher, S. J. T. (2021). Medication Management Frameworks in The Context of Self-Management: A Scoping Review. *Patient Preference and Adherence*, 15, 1311-1329. <https://doi.org/10.2147/PPA.S308223>
- Damrongratnuwong, W., Masingboon, K., & Wacharasin, C. (2024a). Effectiveness of an Individual and Family Educative-Supportive Program among People with Heart Failure: A Quasi-Experimental Study. *Pacific Rim International Journal of Nursing Research*, 28(3), 659-675. <https://doi.org/10.60099/prijnr.2024.267970>
- Damrongratnuwong, W., Masingboon, K., & Wacharasin, C. (2024b). Effectiveness of an Individual and Family Educative-Supportive Program among People with Heart Failure: A Quasi-Experimental Study. *Pacific Rim International Journal of Nursing Research*, 28(3), 659-675. <https://doi.org/10.60099/prijnr.2024.267970>
- Febtrina, R., & Malfasari, E. (2018). Analisa Nilai Tanda-Tanda Vital Pasien Gagal Jantung. *Health Care: Jurnal Kesehatan*, 7(2), 62-68. <https://doi.org/https://doi.org/10.36763/healthcare.v7i2.26>
- Fitri, R. E. (2024). Hubungan Kepatuhan Obat dengan Regulasi Kadar Tekanan Darah pada Ibu Hamil di Puskesmas Kota Semarang. Universitas Islam Sultan Agung.
- Haryati, H., Saida, S., & Rangki, L. (2020). Kualitas Hidup Penderita Gagal Jantung Kongestif Berdasarkan Derajat Kemampuan Fisik dan Durasi Penyakit. *Faletehan Health Journal*, 7(2), 70-76. <https://doi.org/https://doi.org/10.33746/fhj.v7i02.134>
- Khasanah, S., Susanto, A., & Rudiati, R. (2020a). Analisis Faktor yang Berhubungan dengan Kejadian Rehospitalisasi Pasien Gagal Jantung Kongestif. *Profesi (Profesional Islam): Media Publikasi Penelitian*, 17(2), 30-36. <https://doi.org/10.26576/profesi.v17i2.24>
- Khasanah, S., Susanto, A., & Rudiati, R. (2020b). Analisis Faktor yang Berhubungan dengan Kejadian Rehospitalisasi Pasien Gagal Jantung Kongestif. *Profesi (Profesional Islam): Media Publikasi Penelitian*, 17(2), 30-36. <https://doi.org/10.26576/profesi.v17i2.24>
- Kristinawati, B., Fikriyah, M. J., Mardana, N. W., & Latiifah, I. R. N. (2024). An Exploratory Study of Psychological Changes in Families of Heart Failure Patients. In *Proceedings of the 2nd Lawang Sewu International Symposium on Health Sciences: Nursing (LSISHS - N 2023)* (pp. 118-127). https://doi.org/10.2991/978-94-6463-467-9_11
- Kristinawati, B., Wijayanti, N., & Mardana, N. (2023). Improving Medication Adherence of Patients with Heart Failure Using Tele-Motivational Interviewing. *European Review for Medical & Pharmacological Sciences*, 27(21).
- Lecoœur, E., Domengé, O., Fayol, A., Jannot, A. S., & Hulot, J. S. (2023). Epidemiology of heart failure in young adults: a French nationwide cohort study. *European Heart Journal*, 44(5), 383-392. <https://doi.org/10.1093/eurheartj/ehac651>
- Lee, C. J., Lee, H., Yoon, M., Chun, K. H., Kong, M. G., Jung, M. H., Kim, I. C., Cho, J. Y., Kang, J., Park, J. J., Kim, H. C., Choi, D. J., Lee, J., & Kang, S. M. (2024). Heart Failure Statistics 2024 Update: A Report From

- the Korean Society of Heart Failure. *International Journal of Heart Failure*, 6(2), 56-69. <https://doi.org/10.36628/ijhf.2024.0010>
- McDonagh, T. A., Metra, M., Adamo, M., Baumbach, A., Böhm, M., Burri, H., Čelutkienė, J., Chioncel, O., Cleland, J. G. F., Coats, A. J. S., Crespo-Leiro, M. G., Farmakis, D., Gardner, R. S., Gilard, M., Heymans, S., Hoes, A. W., Jaarsma, T., Jankowska, E. A., Lainscak, M., ... Koskinas, K. C. (2021). Guidelines for The Diagnosis and Treatment of Acute and Chronic Heart Failure. *European Heart Journal*, 42(36), 3599-3726. <https://doi.org/10.1093/eurheartj/ehab368>
- Muliantino, M. R., Afriyanti, E., & Jihan, E. (2025). Hubungan Spiritualitas dengan Kualitas Hidup Pasien Gagal Jantung Kongestif. *JIK JURNAL ILMU KESEHATAN*, 9(1), 64. <https://doi.org/10.33757/jik.v9i1.1153>
- Nursita, H., & Pratiwi, A. (2020). Peningkatan Kualitas Hidup pada Pasien Gagal Jantung: A Narrative Review Article (Improved Quality of Life in Heart Failure Patients: A Narrative Review Article). *Jurnal Berita Ilmu Keperawatan*, 13(1), 10-21. <https://doi.org/10.23917/bik.v13i1.11916>
- O'Connor, A. M. (2005). Traditional Decisional Conflict Scale (DCS) - Statement Format: 16 item 5 response categories. *Conflict*, 2005.
- Oktavina, R., Jumaiah, W., Purnamawati, D., Sofyani, Y., & Sumedi, S. (2023). Determinan Kepatuhan Minum Obat Gagal Jantung. *Journal of Telenursing (JOTING)*, 5(2), 2947-2955. <https://doi.org/10.31539/joting.v5i2.7510>
- Permana, R. A. (2021). Dukungan Keluarga Berhubungan dengan Perilaku Perawatan Diri Pasien Gagal Jantung di Surabaya. *Jurnal Penelitian Kesehatan Suara Forikes*, 12, 26-30. <https://doi.org/http://dx.doi.org/10.33846/sf12107>
- Pramesti, D. E., & Kristinawati, B. (2024). Tingkat Dukungan Keluarga terhadap Efikasi Diri pada Penderita Gagal Jantung. *Holistik Jurnal Kesehatan*, 18(6), 724-733. <https://doi.org/10.33024/hjk.v18i6.352>
- Prameswari, S. T., & Kristinawati, B. (2025). The Role of Family Support in Enhancing Illness Acceptance Among Heart Failure Patients. *Jurnal Kesehatan*, 16(1), 26-32. <https://doi.org/10.26630/jk.v16i1.4872>
- Priandani, Kusumajaya, H., & Permatasari, I. (2024). Faktor-Faktor yang Berhubungan dengan Kejadian Congestive Heart Failure (CHF) Pasien. *Jurnal Penelitian Perawat Profesional*, 6(1), 273-284. <https://doi.org/https://doi.org/10.37287/jppp.v6i1.2097>
- Putri, A. D., Rizkifani, S., & Nurbaeti, S. N. (2023). Analisis Hubungan Perawatan Diri dengan Kualitas Hidup Analisis Hubungan Perawatan Diri dengan Kualitas Hidup pada Pasien Gagal Jantung Kongestif. *Media Karya Kesehatan*, 6(2), 267-283. <https://doi.org/https://doi.org/10.24198/mkk.v6i2.50412>
- Rochmawati, Mikarsa, H. L., & Puspitawati, I. (2025). Pengaruh Kecemasan dan Conscientiousness terhadap Keputusan Penggunaan Kontrasepsi pada Wanita Usia Subur. *IDEA: Jurnal Psikologi*, 9(1), 91-97. <https://doi.org/10.32492/idea.v9i1.9110>
- Samsky, M. D., Lin, L., Greene, S. J., Lippmann, S. J., Peterson, P. N., Heidenreich, P. A., Laskey, W. K., Yancy, C. W., Greiner, M. A., Hardy, N. C., Kavati, A., Park, S., Mentz, R. J., Fonarow, G. C., & O'Brien, E. C. (2020). Patient Perceptions and Familiarity with Medical Therapy for Heart Failure. *JAMA Cardiology*, 5(3), 292-299. <https://doi.org/10.1001/jamacardio.2019.4987>
- Siregar, M. A., Dedi, & Aritonang, M. A. S. (2024). Hubungan Dukungan Keluarga dan Kualitas Hidup Pada Pasien Congestive Heart Failure. *Jurnal Keperawatan Cikini*, 5(2), 205-213. <https://doi.org/10.55644/jkc.v6i02.171>
- Tomasoni, D., Adamo, M., Lombardi, C. M., & Metra, M. (2019). Highlights in Heart Failure. *ESC Heart Failure*, 6(6), 1105-1127. <https://doi.org/10.1002/ehf2.12555>
- Wilhelmsen, N. C., & Eriksson, T. (2019). Medication Adherence Interventions and Outcomes: An Overview of Systematic Reviews. *European Journal of Hospital Pharmacy*, 26(4), 187-192. <https://doi.org/10.1136/ejhpharm-2018-001725>
- Zahira, G. R. (2020). *Family Support & Gratitude Terhadap Family Quality of Life Pada Orang Tua dengan Anak Berkebutuhan Khusus*. Universitas Islam Negeri Sultan Syarif Kasim Riau.