

INFORMASI ARTIKEL

Received: February, 03, 2026

Revised: March, 26, 2026

Available online: March, 27, 2026

at: <https://e-jurnal.iphorr.com/index.php/mhc>

Anxiety, family support, and sleep quality in patients with congestive heart failure

Nina Istiqomah*, Tutik Rahayu, Apriliani Yulianti Weriningsih

Fakultas Ilmu Keperawatan, Universitas Islam Sultan Agung Semarang

Corresponding author: *E-mail: ninaistiqomah47@gmail.com

Abstract

Background: Sleep disturbances are common in patients with congestive heart failure (CHF), which can negatively impact quality of life and worsen clinical symptoms.

Purpose: To examine the influence of anxiety and family support on sleep quality among patients.

Method: The research methodology for this study was a cross-sectional descriptive analytical design. Through the use of a purposive sampling approach, 75 participants were selected for this study. The research instruments used in this study were the HPSS, the MOS Social Support Survey, and the Pittsburgh Sleep Quality Index (PSQI).

Results: Patients with CHF had a statistically significant correlation between their anxiety levels and their sleep quality ($p = 0.032$). Patients' sleep quality was negatively affected by their anxiety levels. There was no statistically significant correlation between family support and sleep quality ($p = 0.457$).

Conclusion: In patients with CHF, anxiety levels were significantly correlated with poor sleep quality, although family support was not.

Keywords: Anxiety; Congestive Heart Failure; Family Support; Sleep Quality.

INTRODUCTION

Patients with congestive heart failure (CHF) frequently experience sleep disturbances that have a significant impact on quality of life and disease progression (Wicaksono, Yusuf, & Widyawati, 2023). Common sleep problems include insomnia, frequent awakening due to orthopnea, nocturia, and non-restorative sleep. In addition, CHF is closely associated with sleep apnea, both obstructive and central, which may lead to recurrent hypoxia, increased sympathetic nervous system activity, and worsening cardiac function (Pramesti & Kristinawati, 2024).

Studies in Indonesia have shown that the majority of patients with CHF have poor sleep quality, as indicated by a PSQI score >5 . Poor sleep quality is associated with older age, duration of CHF, comorbidities, pain, the care environment, medication use, and anxiety. Pain and the intensive care environment have been shown to significantly affect

the sleep quality of cardiovascular patients, thereby requiring optimal nursing interventions (Chasanah & Supratman, 2018). The sleep quality of patients with CHF is influenced by a combination of physiological and psychological factors. Clinical symptoms such as orthopnea, nocturia, and sleep apnea contribute to sleep fragmentation, while anxiety, chronic stress, and fear of sudden death exacerbate insomnia. Anxiety may also be triggered by dyspnea, concerns about disease recurrence, the burden of long-term treatment, and activity limitations, all of which collectively reduce the quality of life of patients with CHF (Ardhiansyah & Hudiawati, 2023).

Family support plays an important role in reducing anxiety and improving the sleep quality of patients with CHF. Emotional support and family accompaniment can create a sense of security, enhance adherence to treatment, and reduce the risk of psychological disturbances. Studies have shown

that strong social support contributes to improved sleep quality and better psychological well-being among patients with CHF (Destriyani, Sakti, & Agustiana, 2025). Nevertheless, studies examining the relationship between anxiety, family support, and sleep quality among patients with CHF remain limited, particularly in the local context. A preliminary study conducted at RSUP Dr. Kariadi Semarang indicated that most patients with CHF experienced sleep disturbances, anxiety related to their illness, and suboptimal family support. Therefore, this study is important to fill the existing scientific gap and to serve as a basis for developing holistic nursing interventions that address the physiological, psychological, and social aspects of patients with CHF (Marfiani & Pujasari, 2025).

RESEARCH METHOD

With anxiety and family support as independent factors and sleep quality in patients with congestive heart failure (CHF) as the dependent variable, this study employs a conceptual framework to explain these relationships. This study uses a descriptive-analytical cross-sectional design. Of the 296 patients hospitalized for CHF at Dr. Kariadi General Hospital in Semarang between January and December 2024, 75 patients were deemed eligible to participate in the study based on the Slovin formula and other inclusion and exclusion criteria. From October to December 2025, the study was conducted in the cardiac inpatient unit at Dr. Kariadi General Hospital in Semarang. Patients' anxiety levels were assessed using the Hamilton Anxiety Rating Scale (HARS), their family support using the Medical Outcomes Study (MOS) questionnaire, and their sleep quality using the Pittsburgh Sleep Quality Index (PSQI). All variables were measured using ordinal scales, and data were collected via structured questionnaires. No. 16613/EC/KEPK-RSDK/2025.

RESEARCH RESULTS

Table 1. Frequency Distribution of Respondents (N= 65)

Variable	Results	P-Value
Age (n/%) (Mean±SD) (Range) (Year)	(42.9±9.2) (15-70)	
15-64	66/88.0	
≥65	9/12.0	
Gender (n/%)		
Male	46/61.3	
Female	29/38.7	
Family Support (n/%)		
Good	71/94.7	0.457
Moderate	2/2.7	
Poor	2/2.7	
Anxiety Level (n/%)		
No Anxiety	23/30.7	0.032
Mild	15/20.0	
Moderate	18/24.0	
Severe	15/20.0	
Panic	4/5.3	

Nina istiqomah, Tutik Rahayu, Apriliani Yulianti Weriningsih

Fakultas Ilmu Keperawatan, Universitas Islam Sultan Agung Semarang
Corresponding author: *E-mail: ninaistiqomah47@gmail.com

Doi: 10.56922/mhc.v4i7.2483

Sleep Quality (n/%)	
Good	18/24.0
Poor	57/76.0

This table presents the demographic and clinical characteristics of the respondents. The mean age of the respondents was 42.9 ± 9.2 years, with an age range of 15–70 years. Most respondents were aged 15–64 years (88.0%), while 12.0% were aged 65 years and older. Based on gender, the majority of respondents were male (61.3%), while 38.7% were female. Regarding family support, most respondents reported good family support (94.7%), while only 2.7% reported moderate family support and 2.7% reported poor family support. The p-value for family support was 0.457, indicating that there was no statistically significant association. In terms of anxiety level, 30.7% of respondents had no anxiety, 20.0% had mild anxiety, 24.0% had moderate anxiety, 20.0% had severe anxiety, and 5.3% had panic anxiety. The p-value for anxiety level was 0.032, indicating a statistically significant association ($p < 0.05$). Furthermore, most respondents had poor sleep quality (76.0%), while only 24.0% had good sleep quality.

DISCUSSION

Age and sex are fundamental characteristics that may influence the physical and psychological condition of respondents. Among adults and older adults, individuals generally begin to experience physiological changes, declining bodily functions, and increased vulnerability to health-related stressors. These conditions may affect an individual's ability to adapt to illness and to the care process (Wicaksono, 2022). In addition, sex differences may influence responses to health conditions from biological, hormonal, and psychosocial perspectives. Men and women often demonstrate different coping patterns, perceptions of illness, and emotional responses; therefore, these characteristics should be considered important factors that may influence the overall condition of respondents (Abdul & Nuryanik, 2021).

Family support is theoretically considered a protective factor that contributes to improving comfort, sense of security, motivation, and an individual's capacity to cope with health problems. The presence of family may provide emotional, informational, and

instrumental support that helps respondents adapt to their current condition (Sari, Hasymi, & Yuseva, 2019). However, not all forms of family support directly exert a strong effect on the study outcome. This may occur because an individual's psychological and physical condition is not determined solely by family support, but also by internal factors such as coping mechanisms, level of illness acceptance, previous experiences, and the healthcare environment. Therefore, although family support remains important in the care process, its effectiveness may vary depending on the context and individual characteristics (Hardianti, Andriati, & Wahyuni, 2024).

Anxiety plays a more direct role in influencing respondents' condition, particularly in relation to comfort and quality of rest (Siregar, Dedi, & Aritonang, 2024). Psychologically, anxiety may generate feelings of fear, worry, tension, and uneasiness, which in turn activate the sympathetic nervous system. This condition may result in increased heart rate, muscle tension, difficulty relaxing, and disturbances in initiating and maintaining sleep. Therefore, the higher the level of anxiety experienced by an individual, the greater the likelihood of impaired sleep quality. In the nursing context, these findings highlight the importance of interventions focused on anxiety reduction, such as education, therapeutic communication, relaxation techniques, and psychological support, because effective anxiety management may help improve sleep quality and support the recovery process (Istiroha, Sutrisno, Basri, & Zahroh, 2024).

The correlation between anxiety level and sleep quality in patients with congestive heart failure (CHF) was found to be statistically significant ($p < 0.05$) based on bivariate analysis using the Chi-square test. The findings demonstrated a strong relationship between anxiety and sleep quality, in which higher levels of anxiety were associated with poorer sleep quality (Tareluan, Bawotong, & Hamel, 2016). This relationship indicates that anxiety functions as a psychological factor influencing the sleep quality of patients with CHF. Anxiety may increase alertness, impair relaxation, and disrupt sleep mechanisms,

Nina Istiqomah, Tutik Rahayu, Apriliani Yulianti Weriningsih

Fakultas Ilmu Keperawatan, Universitas Islam Sultan Agung Semarang
Corresponding author: *E-mail: ninaistiqomah47@gmail.com

Doi: 10.56922/mhc.v4i7.2483

thereby making patients more vulnerable to poor sleep quality (Kamila, Arfiyanti, Novitasari, & Muslimah, 2025).

According to the study findings, male patients accounted for 61.3% of CHF cases at Dr. Kariadi General Hospital in Semarang, and the majority of these patients were of working age (88%). Most respondents had good family support (94.7%), with anxiety levels ranging from no anxiety to moderate anxiety, while sleep quality was predominantly classified as poor (76%). These findings indicate that poor sleep quality remains a major problem among patients with CHF, even though most respondents received optimal family support, suggesting that factors other than social support may have a greater influence on patients' sleep quality (Romadoni, 2018).

Bivariate analysis showed no significant relationship between family support and sleep quality among patients with CHF ($p = 0.457$), indicating that sleep disturbances may be more strongly influenced by physiological factors such as dyspnoea, orthopnoea, fatigue, and nocturia than by psychosocial factors (Saida, Haryati, & Rangki, 2020). In contrast, a significant relationship was found between anxiety level and sleep quality among patients with CHF ($p = 0.032$), with increased anxiety being associated with poorer sleep quality (Sahir, 2022). Anxiety triggers activation of the sympathetic nervous system, which inhibits relaxation and exacerbates sleep disturbances in patients with hemodynamic instability (Sari, Hafifah, & Choiruna, 2021). These findings are consistent with previous studies emphasizing that anxiety is a major psychological factor contributing to sleep disturbances in patients with heart failure (Utami, Irawan, & Gamar, 2025). Therefore, a holistic nursing approach is needed that includes the management of both the physical and psychological conditions of patients with CHF (Wati, Oktarina, & Rudini, 2020).

CONCLUSION

Men of working age make up the majority of patients with congestive heart failure (CHF) being treated. Although most survey respondents have strong family support, the majority of CHF patients still report poor sleep quality. Patients with congestive heart failure do not benefit from better sleep quality despite having family support. The sleep quality of

CHF patients is significantly correlated with their anxiety levels; higher anxiety levels are associated with lower sleep quality. Anxiety is one of several psychological factors that significantly influence patients' sleep conditions and, indirectly, their sleep quality in chronic heart failure (CHF).

REFERENCES

- Abdul, R. M., & Nuryanik, E. (2021). The Effect Of Guided Imagery On Sleep Patterns Of Congestive Heart Failure (CHF) Patients In Kelet RSU, Central Java. *Jurnal Seri Kesehatan*, 671, 301.
- Ardhiansyah, M. F. F., & Hudiawati, D. (2023). Hubungan Tingkat Stres Dengan Kualitas Tidur Pada Pasien Gagal Jantung. *Health Information: Jurnal Penelitian*.
- Chasanah, N., & Supratman, S. (2018). Hubungan kualitas tidur dengan kualitas hidup pada lansia di Surakarta. *Jurnal Berita Ilmu Keperawatan*, 11(1), 10-18.
- Destriyani, C. A., Sakti, K. W., & Agustiana, M. (2025). Hubungan Dukungan Keluarga dengan Tingkat Kecemasan pada Lansia di Desa Panyusuhan Kecamatan Sukaluyu Kabupaten Cianjur. *Nursing Applied Journal*, 3(2), 23-36.
- Hardianti, T., Andriati, R., & Wahyuni, V. (2024, July). Hubungan Ansietas Dengan Kualitas Hidup Pasien Gagal Jantung Di Rs Jantung Dan Pembuluh Darah Harapan Kita. In *Prosiding Semlitmas (Seminar Hasil Penelitian Dan Pengabdian Masyarakat)* (Vol. 1, No. 1, pp. 141-157).
- Istiroha, I., Sutrisno, S., Basri, A. H., & Zahroh, R. (2024). Gangguan Tidur Dan Kualitas Hidup Pasien Penyakit Ginjal Kronis Yang Menjalani Hemodialisis Di Wilayah Kabupaten Gresik. *Jurnal Keperawatan*, 13(1), 15-23.

Nina Istiqomah, Tutik Rahayu, Apriliani Yulianti Weriningsih

Fakultas Ilmu Keperawatan, Universitas Islam Sultan Agung Semarang
Corresponding author: *E-mail: ninaistiqomah47@gmail.com

Doi: 10.56922/mhc.v4i7.2483

- Kamila, K., Arfiyanti, M. P., Novitasari, A., & Muslimah, M. (2025). The Relationship Between Anxiety Levels and Family Support and UKMPPD Results at The Faculty of Medicine, University of Muhammadiyah Semarang. *International Journal of Health and Pharmaceutical (IJHP)*, 5(1), 185-188.
- Marfiani, R., & Pujasari, H. (2025). Karakteristik subjektif tidur klien rawat inap dewasa di rumah sakit x depok. *Jurnal Keperawatan Indonesia*, 18(3), 149-156.
- Pramesti, D. E., & Kristinawati, B. (2024). Tingkat dukungan keluarga terhadap efikasi diri pada penderita gagal jantung. *Holistik Jurnal Kesehatan*, 18(6), 724-733.
- Romadoni, S. (2018). Faktor-Faktor yang Berhubungan dengan Kualitas Tidur pada Pasien di Ruang Intensive Care Unit Rumah Sakit X Palembang. *Masker Medika*, 6(2), 332-343.
- Sahir, S. H. (2022). Buku ini di tulis oleh Dosen Universitas Medan Area Hak Cipta di Lindungi oleh Undang-Undang Telah di Deposit ke Repository UMA pada tanggal 27 Januari 2022. *Penerbit KBM Indonesia*.
- Saida, S., Haryati, H., & Rangki, L. (2020). Kualitas hidup penderita gagal jantung kongestif berdasarkan derajat kemampuan fisik dan durasi penyakit. *Faletehan Health Journal*, 7(02), 70-76.
- Sari, I., Hafifah, I., & Choiruna, H. P. (2021). Faktor-Faktor Yang Berhubungan Dengan Kualitas Tidur Pasien Di ICCU RSUD Ulin Banjarmasin. *Dunia Keperawatan: Jurnal Keperawatan dan Kesehatan*, 9(2), 310-318.
- Sari, P. M., Hasymi, Y., & Yuseva, M. (2019). Gambaran Kualitas Tidur Pada Pasien Gagal Jantung di Ruang ICCU RSUD dr. M. Yunus Bengkulu Tahun 2018. *Jurnal Vokasi Keperawatan (JVK)*, 2(1), 61-71.
- Siregar, M. A., Dedi, D., & Aritonang, M. A. S. (2024). Hubungan Dukungan Keluarga dan Kualitas Hidup Pada Pasien Congestive Heart Failure. *Jurnal Keperawatan Cikini*, 5(2), 205-213.
- Tareluan, D. G., Bawotong, J., & Hamel, R. (2016). Hubungan Antara Beban Kerja Dengan Gangguan Pola Tidur Pada Perawat Di Instalasi Gawat Darurat Non Trauma Rsup Prof Dr. RD Kandou Manado. *Jurnal Keperawatan UNSRAT*, 4(2), 112484.
- Utami, N. K. I. P., Irawan, D. S., & Gamar, G. (2025). Hamilton Anxiety Rating Scale Untuk Mengetahui Gangguan Kecemasan Pada Lansia Di Puskesmas Mulyorejo, Kota Malang. *Jurnal Pengabdian Masyarakat Mentari*, 1(8), 331-335.
- Wati, Z. M. E., Oktarina, Y., & Rudini, D. (2020). Hubungan tingkat kecemasan dengan kualitas tidur pada pasien gagal jantung kongestif (CHF). *Jurnal Ilmiah Ners Indonesia*, 1(1), 46-57.
- Wicaksono, D. W. (2022). *Analisis faktor dominan yang berhubungan dengan kualitas tidur pada mahasiswa Fakultas Keperawatan Universitas Airlangga* (Doctoral dissertation, UNIVERSITAS AIRLANGGA).
- Wicaksono, D. W., Yusuf, A., & Widyawati, I. Y. (2023). Faktor dominan yang berhubungan dengan kualitas tidur pada mahasiswa Fakultas Keperawatan Universitas Airlangga. *Critical Medical and Surgical Nursing Journal*, 1(2), 92-101.

Nina istiqomah, Tutik Rahayu, Apriliani Yulianti Weriningsih

Fakultas Ilmu Keperawatan, Universitas Islam Sultan Agung Semarang
Corresponding author: *E-mail: ninaistiqomah47@gmail.com

Doi: 10.56922/mhc.v4i7.2483