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Family support and anxiety levels in chronic kidney disease patients undergoing hemodialysis

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Abstract

Background: The incidence of chronic kidney disease (CKD) in Indonesia is 0.38% of the total population of 252.124.458, approximately 713.783 individuals. In Lampung Province, it is estimated that there are 25,842 CKD patients in 2023, ranking Lampung 18th in Indonesia for this disease.

Purpose: To determine the relationship between family support and anxiety levels in chronic kidney disease patients undergoing hemodialysis at RSUD Abdul Moeloek, Lampung Province, in 2025.

Method: A quantitative analytical design with a cross-sectional approach. The population consists of 150 hemodialysis patients at RSUD Abdoel Moloek in Lampung Province, with a sample size of 110 respondents. The sampling technique used is purposive sampling. Data analysis is conducted using the chi-square statistical test

Results: Based on frequency distribution, 36.4% of respondents reported low family support, while 63.6% reported good family support. A p-value of 0.001 was obtained, with an odds ratio of 4.026.

Conclusion: There is a relationship between family support and anxiety levels (p value 0.001, OR 4.02) in chronic kidney failure patients undergoing hemodialysis at RSUD Abdul Moeloek, Lampung Province, in 2025. Healthcare providers need to implement programs involving families to enhance emotional support for chronic kidney failure patients, such as educational videos and posters about supporting hemodialysis patients

Keywords: Anxiety; Family Support; Hemodialysis.

INTRODUCTION

Non-communicable diseases (NCDs) are a major issue that can lead to high mortality rates and pose significant barriers to the development of healthcare services in Indonesia. One of these non-communicable diseases is chronic kidney disease, which continues to rise. This trend negatively impacts the country's economic growth and productivity, as its management requires significant expenditures and a relatively long duration of treatment (Purnawinadi, 2021). According to data in 2020, approximately 15% of the global population experienced chronic kidney disease, resulting in 1.2 million deaths. In 2021, there were 254,028 recorded deaths due to this disease (Saputra, Anggraini, & Lestari, 2024). Meanwhile, in

2022, the number of chronic kidney disease cases reached over 843.6 million, and it is predicted that deaths due to this condition will increase by 41.5% by 2040. This high statistic identifies chronic kidney disease as the 12th leading cause of death (Rahman & Pradido, 2020). Based on data, the prevalence of chronic kidney disease in Indonesia reaches 0.38% of the total population, which amounts to 252,124,458 people. This means that approximately 713,783 individuals in Indonesia are affected by chronic kidney disease. Meanwhile, the Health Office of Lampung Province estimates that the number of chronic kidney disease (CKD) patients in Lampung Province will reach 25,842 in 2023, ranking Lampung 18th in Indonesia for the prevalence of this disease. According to preliminary surveys obtained from the

Medical Records at Dr. H. Abdoel Moeloek Regional General Hospital, the number of outpatient visits for chronic kidney disease in 2024 is 13,077. The number of patients undergoing routine hemodialysis from January to November is 313 patients in the hemodialysis unit of Dr. H. Abdoel Moeloek Regional General Hospital (Tezel, Karabulutlu, & Şahin, 2021).

Chronic kidney disease is a medical condition characterized by a gradual and prolonged decline in kidney function. This process occurs over an extended period and can be caused by various factors, such as diabetes, hypertension, or kidney infections. The damage that occurs to the nephrons, including the glomeruli and renal tubules, is permanent, preventing the kidneys from returning to normal function. The most common form of kidney replacement therapy is kidney transplantation, also known as hemodialysis (Siregar, 2020). Short-term hemodialysis is often applied to address acute conditions, such as poisoning or fluid overload, without a decline in kidney function, and is performed over a period of several days to weeks. Meanwhile, long-term hemodialysis is intended for patients with end-stage renal disease (ESRD). Individuals with chronic kidney disease, whether newly diagnosed or with prior experience, often experience anxiety due to their dependence during the hemodialysis process. This can affect their financial situation, productivity, and psychological well-being (Suarni, Wahyuni, & Faswita, 2022).

Anxiety is an emotional state that arises from a sense of discomfort experienced by an individual. It is often accompanied by feelings of helplessness and uncertainty, caused by unclear situations or factors. Anxiety can also be triggered by the possibility of future events, creating experiences that are often difficult to comprehend (Ramie, 2022). Anxiety experienced by chronic kidney disease (CKD) patients undergoing hemodialysis can have significant impacts both clinically and psychologically. Common clinical issues that arise include hypertension, insomnia, and decreased immunity. Transient hypertension often occurs during the first dialysis session, caused by the activation of the sympathetic nervous system in response to anxiety. This activation leads to vasoconstriction of blood vessels, which in turn increases blood pressure. The hypertension that occurs may pose a risk of causing brain damage

through the blockage and rupture of blood vessels in the brain, thereby adding to the complexity of the patient's health condition (Patimah, 2021). 26 respondents (51.0%) had similar status to the majority of respondents. Based on statistical analysis using Spearman Rho, the study showed a p-value of 0.0112 (Marwanti, Islamiati, & Zukhri, 2022). This indicates a significant relationship between family members and patients with chronic kidney disease undergoing hemodialysis.

Patients with kidney failure undergoing hemodialysis are often accompanied by family members until the process is complete; however, there are also patients who do it alone without family support. This can be due to various reasons, including a lack of support from family for patients undergoing hemodialysis. Family support is an essential part of the social support needed to assist family members requiring hemodialysis therapy. The impact of patients not receiving family support tends to lead them to feel like a burden, which can increase stress levels. Conversely, those with close friends and family may have longer and more frequent interactions, which can enhance their motivation to undergo hemodialysis (Inayati, Hasanah, & Maryuni, 2020). There is a relationship between family dynamics and anxiety levels in chronic kidney patients undergoing hemodialysis at Yukum Medical Center in 2021 (Nugraha, Rahmah, & Bhudijaji, 2020). A detailed survey of ten patients treated on December 9, 2024, at the Hemodialysis Unit of Dr. H. Abdul Moeloek Regional General Hospital revealed that one patient experienced severe anxiety, five patients had moderate anxiety, and four patients experienced mild anxiety. It was also found that five individuals were regularly spoken to by their friends and family, three were engaged in conversation by their friends but were not active about their condition, and two were only included as group members (Lilympaki, Makri, Vlantousi, Koutelekos, Babatsikou, & Polikandrioti, 2016).

RESEARCH METHOD

A quantitative method with a cross-sectional approach. The variables of this study are family support and anxiety levels. The population for this research consists of hemodialysis patients at Dr. H. Abdul Moeloek Regional General Hospital, totalling

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150 patients. The sample comprises 110 patients undergoing hemodialysis. This research utilizes an analytical survey design. The data collection instrument used is the HRS-A (Hamilton Rating Scale for Anxiety) questionnaire, where a score of 0 indicates mild anxiety (0–20), and a score of 1

indicates moderate anxiety (21–27). The family support questionnaire assigns a score of 0 for good family support (≥ 25) and a score of 1 for inadequate family support (< 25). Ethical approval was obtained from Dr. H. Abdul Moeloek Regional General Hospital with Ethics No. 488/KEPK-RSUDAM/IV/2025.

RESEARCH RESULTS

Table 1. Frequency Distribution of Respondents (n = 110)

Variable	Results	P-Value	QR (95%CI)
Age (n/%) (Mean$\pm$SD) (Range) (Year)	(54.1 $\pm$ 11.3) (26–70)		
26–35	8/7.3		
36–45	17/15.5		
46–55	29/26.4		
56–65	38/34.5		
≥ 65	18/16.4		
Anxiety (n/%)			
Mild	43/39.1		
Moderate	67/60.9		
Family support (n/%)			
Good	40/36.4		4.026
Poor	70/63.6	0.001	(1.768–9.171)

The majority of respondents were aged 56–65 years, accounting for 38 respondents (34.5%), with a mean age of 54.1 ± 11.3 years and an age range of 26–70 years. Most respondents experienced moderate anxiety, totaling 67 respondents (60.9%). In terms of family support, the majority of respondents reported poor family support, with 70 respondents (63.6%). The analysis showed a statistically significant relationship between family support and anxiety level ($p = 0.001$), with a prevalence ratio (PR) of 4.026 (95% CI: 1.768–9.171).

DISCUSSION

The results of the study indicate that among CKD patients, 40 respondents (36.4%) had good family support, while 70 respondents (63.6%) had inadequate family support. This is consistent with the research conducted by (Putri, Alini, & Indrawati, 2020). Among patients with inadequate family support, 25 respondents (53.2%) experienced anxiety, whereas 22 respondents (46.8%) had good family support.

This study highlights that hemodialysis patients at Regional public hospital Bangkinang who do not experience anxiety are predominantly those with good family support. Conversely, patients experiencing mild anxiety are more commonly those with low family support (Vranada & Sari, 2026).

According to the researcher, many patients still receive insufficient support from their families, such as instrumental support; many family members rarely accompany or transport patients for dialysis sessions, and many do not offer praise when patients diligently undergo treatment. The researcher believes that family support has a significant impact on the psychological condition of patients, particularly in managing the anxiety that often arises during hemodialysis therapy. Inadequate family support can lead patients to feel isolated, overlooked, and emotionally stressed, ultimately increasing the risk of anxiety, depression, and a decline in quality of life (Al Kahfi, Rahman, Palimbo, & Sari, 2017).

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The results of the study indicate that among CKD patients, 43 respondents (39.1%) experienced mild anxiety, while 67 respondents (60.9%) experienced moderate anxiety. This is consistent with the research conducted by Suarni et al. (2022), which showed that the majority of respondents had moderate anxiety levels, with 23 respondents (56%) categorized as such, while 12 respondents (29%) had mild anxiety, and 6 respondents (15%) experienced severe anxiety. The respondents with severe anxiety reported feelings of confusion, fear, and heightened concern about their illness and the risk of death (George, Zaidi, & Kazmi, 2022).

According to the researcher, anxiety remains a significant psychological issue among CKD patients undergoing hemodialysis. The researcher believes that this is closely related to the long-term nature of hemodialysis, which requires regular adherence to medical procedures, placing a burden not only on the physical condition but also impacting the emotional and social aspects of patients. Additionally, the researcher notes that anxiety arises in CKD patients undergoing hemodialysis partly due to a lack of family support, leading patients to feel neglected and isolated, which increases their anxiety about their condition. Nursing interventions should not only focus on clinical aspects but also include psychosocial support such as counseling, emotional therapy, and active family involvement as part of strategies to reduce anxiety and improve patients' quality of life (Isnaini, Sukma, & Aprilina, 2021).

The results indicate a relationship between family support and anxiety levels in chronic kidney disease patients undergoing hemodialysis, with a p-value of 0.001. The Odds Ratio was 4.026 (1.768-9.171), meaning that inadequate family support poses a 4.02 times greater risk of experiencing anxiety compared to patients with good family support (Kurniawan, Elasari, Wulandari, & Kurniawan, 2024).

According to the researcher, the study shows that hemodialysis patients with low family support are more vulnerable to experiencing anxiety due to a lack of attention, empathy, encouragement, advice, and understanding of their condition. Conversely, patients who receive good family support tend to have lower anxiety levels as they are better able to employ healthier coping mechanisms. However, there are also some patients who receive good family support

but still experience moderate anxiety, which may be due to a lack of acknowledgment and praise from their families when they adhere to their dialysis schedule. Additionally, many patients have not fully accepted their current condition, leading to fear and anxiety about their situation, compounded by a lack of encouragement from family members, making them feel neglected. Conversely, some patients with inadequate family support experience only mild anxiety because they have become accustomed to their situation, such as those who have accepted their illness. Family support can take various forms, including emotional support, information, recognition, and direct assistance. Analysed the data using the Chi-square test and found a p-value of 0.001 ($p < 0.05$), indicating a significant relationship between family support and anxiety (Pratiwi, Gayatri, Astutik, Pratama, & Ayyaroh, 2023).

The results of the interviews with respondents indicate that family support is very important and provides a sense of security for chronic kidney disease patients. However, they still experience anxiety due to uncertainty about their health condition, the lengthy treatment process, and the emotional challenges associated with the illness. Family involvement may not completely alleviate the fears or concerns that arise from difficult medical situations and the lifestyle changes that are required (Lina, Safitri, Oktavidiati, Efrisnal, & Arifah, 2025).

CONCLUSION

There is a relationship between family support and anxiety levels in chronic kidney disease patients undergoing hemodialysis, with a p-value of 0.001. The Odds Ratio is 4.026 (1.768-9.171), meaning that inadequate family support poses a 4.02 times greater risk of experiencing anxiety compared to patients with good family support.

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