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RELATIONSHIP BETWEEN FAMILY SUPPORT AND THE LEVEL OF ANXIETY IN CHRONIC KIDNEY FAILURE PATIENTS IN HEMODIALYSIS

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ABSTRACT

Background: Chronic kidney disease (CKD) is a progressive disease that reduces patients' quality of life, especially those undergoing long-term hemodialysis therapy. This condition not only causes physical burdens but also affects psychological aspects, one of which is anxiety that can hinder the patient's adaptation process. Family support plays an important role in helping patients cope with psychological pressure through emotional, instrumental, and informational support. **Objective:** This study aimed to examine the relationship between family support and anxiety levels in CKD patients undergoing hemodialysis at Umar Wirahadikusumah Regional General Hospital. **Methods:** The research used a quantitative design with a correlational descriptive approach and a cross-sectional design. The research population with an average of 138 patients per month, and 58 respondents were obtained through purposive sampling based on the Slovin formula. The research instrument used a family support questionnaire based on Friedman's theory and the Hamilton Anxiety Rating Scale (HARS) to measure anxiety levels. Data analysis used the Spearman Rank correlation test. **Result:** The Spearman correlation test yielded a value of $r = -0.593$ and $p = 0.000$ ($p < 0.05$), indicating a negative and significant relationship between family support and anxiety levels with a moderate to strong relationship strength. This indicates that the higher the family support received by patients, the lower their anxiety levels. **Conclusion:** Family support plays an important role in reducing the anxiety of hemodialysis patients, although internal factors such as physical condition, coping mechanisms, and perception of the disease still substantially affect anxiety levels.

Keywords: Anxiety; Chronic Kidney Failure; Family Support; Hemodialysis

INTRODUCTION

Chronic kidney disease (CKD) is a progressive disease characterized by a gradual decline in kidney function. This condition disrupts the body's ability to maintain metabolic, fluid, and electrolyte balance. If left untreated, it can lead to uremia, the accumulation of metabolic waste products in the blood (Ali & Nasir, 2017). The main risk factors for CKD include diabetes mellitus, nephrosclerosis due to hypertension, chronic glomerulonephritis, and chronic pyelonephritis (Hasanuddin, 2022). Clinically, CKD is characterized by proteinuria or albuminuria and elevated blood urea and creatinine levels, indicators of impaired kidney function (Tapan, 2023).

According to data from the World Health Organization (WHO) in 2019, the prevalence of CKD reached more than 500 million people worldwide, with approximately 1.5 million patients requiring hemodialysis. This figure continues to increase annually (Nurani & Mariyanti, 2019). This disease also contributes significantly to global mortality, with a mortality rate reaching 850,000 people per year. In Indonesia, the prevalence of chronic kidney disease among the population aged 15 years and older was 0.18% in 2023, or approximately 638,178 cases, with a total of 713,783 patients registered for hemodialysis (Indonesia, 2023). West Java Province recorded the highest number of cases nationally, with 131,846 CKD patients, while Sumedang Regency was among the top three regions with the highest number of cases after Banjar and Cianjur (Adi, 2017). During 2023-2024, Umar Wirahadikusumah Regional General Hospital reported 10,916 hemodialysis procedures, with 62.41% of patients being women (Sumedang Regional General Hospital, 2025).

Hemodialysis is the primary therapy for patients with end-stage chronic kidney disease

(CKD), partially replacing the kidneys' role in removing toxins and excess fluid (Ronco & Clark, 2018). This therapy requires a long-term commitment, performed 2–3 times per week for 4–5 hours per session, impacting the patient's activity, lifestyle, and emotional state (Regina, 2024) In addition to physical complications such as hypotension, muscle cramps, nausea, dyspnea, pruritus, and sleep disturbances, hemodialysis can also cause psychological impacts such as stress, depression, and anxiety due to dependence on the dialysis machine and uncertainty about health (Yulianto, 2020).

Anxiety is one of the most common psychological reactions experienced by patients with CKD. This condition arises in response to uncertain threats and a sense of loss of control over their health (Cukor et al., 2021). The level of anxiety is greatly influenced by the extent to which the patient receives emotional support and information from those closest to them, particularly family (Kopple et al., 2017). The social support theory proposed by (House, 1981)states that there are four forms of social support: emotional, instrumental, informational, and appraisal support. In the nursing context, family support plays a crucial role in providing comfort, motivation, and understanding of disease and treatment management, thereby improving patient coping skills (Friedman, 2023). Previous research has shown a significant relationship between family support and anxiety levels in hemodialysis patients. reported that 88% of patients with low family support experienced severe anxiety. (Fatimah, 2021) also found that patients with full family support did not exhibit severe anxiety. However, several studies in different regions have shown insignificant results, possibly due to differences in respondent characteristics or other contextual factors (Marwanti et al., 2022)

However, most existing studies only evaluate family support in general without specifically examining the role of emotional and informational support on anxiety. At Umar Wirahadikusumah General Hospital in Sumedang, studies on the effect of family support on anxiety in patients with chronic kidney disease (CKD) are still limited, despite the high number of patients undergoing hemodialysis. Therefore, this study aims to specifically analyze the relationship between emotional and informational family support and anxiety levels in patients with CKD undergoing hemodialysis at Umar Wirahadikusumah General Hospital in Sumedang.

Umar Wirahadikusumah General Hospital was selected as the study location because it is a hemodialysis referral center in the region, with adequate facilities and resources. Based on preliminary interviews with patients and their families, it was found that most patients received good family support and were able to manage their anxiety, although some still expressed concerns. This indicates variations in patients' experiences with support and anxiety, making further research important. Therefore, this study aimed to analyze the relationship between family support, especially emotional and informational support, and the level of anxiety in chronic kidney failure (CKD) patients undergoing hemodialysis at Umar Wirahadikusumah Regional General Hospital, so that it can be the basis for developing more holistic nursing interventions that are centered on the psychological needs of patients.

METHOD

This study used a quantitative approach with a cross-sectional design to determine the relationship between family support and anxiety levels in chronic kidney disease (CKD) patients undergoing hemodialysis. The sample consisted of CKD patients undergoing regular hemodialysis at a regional hospital. A total sampling technique was used based on the following inclusion criteria: age ≥18 years, having undergone hemodialysis for at least 3 months, able to communicate verbally, and willing to participate. Exclusion criteria included patients with severe cognitive or psychological disorders. A total of 58 respondents met the criteria.

The research instruments consisted of a family support questionnaire and the Hamilton Anxiety Rating Scale (HARS). The family support questionnaire contains eight items on a Likert scale of 1–4 to measure emotional and

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informational support. The HARS instrument was used to measure anxiety levels with 14 rating items on a scale of 0–4. Both instruments were tested for validity, with calculated r > table r and reliability, with Cronbach's alpha >0.7. Data were collected through questionnaires assisted by researchers during the hemodialysis procedure. Data analysis was conducted using univariate analysis and Spearman Rank correlation tests with a 95% confidence level to examine the relationship between family support and anxiety levels. This study was reviewed and approved by the Health Research Ethics Committee of Malang State University (Approval Number: 17.11.02/UN32.14.2.8/LT/2025).

RESULTS

Univariate Analysis

Table 1 Characteristics of Patients

Characteristics of Patient	n	%
Gender		
Male	21	36.2
Female	37	63.8
Age		
18-25 year	1	1.7
26-35 year	6	10.3
36-45 year	12	20.7
46-55 year	23	39.7
56-65 year	13	22.4
66-75 year	3	5.2
Hemodialysis Frequency		
1x / week	7	12,1
2x / week	51	87,9
Total	58	100.0

Table 1 shows that most respondents were female, numbering 37 people (63.8%). Based on age, the majority of respondents were in the 46–55 age group, numbering 23 people (39.7%), indicating that patients were predominantly in late adulthood to elderly age. Based on haemodialysis frequency, the majority of respondents underwent haemodialysis twice a week, totalling 51 respondents (87.9%), indicating adherence to the recommended therapy.

Bivariate Analysis

Table 2 Family Support Categories

Family Support Category	n	%
Low	22	37.9
Medium	15	25.9
High	21	36.2
Total	58	100.0

Table 2 shows that most respondents had a low level of family support, namely 22 people (37.9%). Furthermore, 21 people (36.2%) were in the high category, and 15 people (25.9%) were in the medium category. These findings indicate that the respondents' family support varied, with the largest proportion being in the low category.

Table 3 Anxiety Level Categories

Anxiety Level Categories	n	%
No Anxiety	3	5.2
Mild Anxiety	6	10.3
Moderate Anxiety	3	5.2
Severe Anxiety	17	29.3
Extreme Anxiety	29	50.2
Total	58	100.0

Table 3 shows that most patients were in the very anxious category, namely 29 respondents (50.0%). In addition, 17 respondents (29.3%) experienced severe anxiety. A small number of respondents were in the mild anxiety category, namely 6 respondents (10.3%), and 3 respondents (5.2%) were in the moderate anxiety category. Only 3 respondents (5.2%) did not experience anxiety. These findings indicate that the anxiety levels of haemodialysis patients tend to be high, with the majority of respondents experiencing severe to very severe anxiety. This indicates that the haemodialysis process can cause significant psychological pressure, including worry, stress, and feelings of fear. Overall, these findings confirm that anxiety is a dominant psychological problem in haemodialysis patients and requires special

attention in nursing interventions and family support.

Table 4 Normality Test

Variable	KS p-value	SW p-value	Result
Family Support	0.044	0.002	Not Normal
Anxiety Level	0.021	0.002	Not Normal

A normality test was conducted to determine whether the data on family support and anxiety levels were normally distributed before further analysis. Based on the results of the Kolmogorov–Smirnov and Shapiro–Wilk tests, both variables showed significance values < 0.05 (p-value for family support: KS = 0.044; SW = 0.002; p-value for anxiety: KS = 0.021; SW = 0.002). Since all significance values were less than 0.05, it can be concluded that the data were not normally distributed. Thus, non-parametric statistical analysis must be used. The appropriate correlation test is Spearman's Rho correlation to assess the relationship between family support and anxiety levels in haemodialysis patients.

Table 5 The Relationship Between Family Support and Anxiety Levels

Variable	r-value	p-value	Result
Family Support			
Anxiety Level	-0.593	0,000	Significant

The results of the Spearman Rank correlation test in Table 5 show a value of r = –0.593 with a value of p = 0.000. The value (p < 0.05) indicates that there is a significant relationship between family support and anxiety levels in haemodialysis patients. A negative correlation value indicates that the relationship between the two variables is inversely proportional with moderate to strong strength. This means that the higher the family support, the lower the anxiety level of the patient. Conversely, patients with low family support tend to experience higher anxiety. These results indicate that family support plays an important role in helping to reduce the anxiety levels of patients undergoing haemodialysis therapy.

DISCUSSION

The characteristics of respondents in this study indicate that the majority of patients undergoing hemodialysis were female and had been receiving therapy regularly in accordance with established clinical standards. This finding reflects a population of patients who have been exposed to long-term, repetitive medical treatment and have therefore undergone a continuous process of physical and psychological adaptation. In the context of chronic kidney disease, hemodialysis is not merely a life-sustaining medical intervention but also a prolonged psychosocial experience that requires patients to adjust to physical limitations, changes in social roles, and ongoing uncertainty regarding their health status. As a result, patients' psychological responses, including anxiety, are shaped by cumulative experiences over time rather than by isolated treatment events.

The results also show variability in the level of family support received by patients, ranging from low to high. Although a considerable proportion of respondents reported high levels of family support, many patients still experienced moderate to severe anxiety. This finding suggests that while family support is present, it does not automatically translate into psychological comfort or emotional stability. Family support, particularly in the context of chronic illness, is a complex construct that encompasses emotional reassurance, instrumental assistance, informational guidance, and social presence. However, the effectiveness of such support is highly dependent on how it is perceived and internalized by the patient. Support that is available but not aligned with the patient's emotional needs may have limited impact on reducing anxiety.

These findings are consistent with international literature indicating that family support plays an important but not exclusive role

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in influencing psychological outcomes among patients with chronic illnesses. Several studies have emphasized that family support can act as a protective factor against psychological distress, yet its impact varies depending on the quality, timing, and type of support provided. Emotional support that conveys empathy, understanding, and acceptance has been shown to be more effective in reducing anxiety than support that is predominantly directive or task-oriented. Conversely, overly controlling or excessively protective family behaviors may inadvertently increase patients' feelings of dependency, helplessness, or emotional burden, thereby intensifying anxiety rather than alleviating it.

Research conducted in collectivist cultural settings further supports this interpretation. In cultures where family closeness and interdependence are strongly emphasized, patients may experience ambivalent emotional responses to family involvement. On one hand, close family relationships provide a sense of security and belonging; on the other hand, they may generate internal pressure to meet family expectations, demonstrate resilience, or avoid becoming a perceived burden. Patients with chronic illnesses such as chronic kidney disease may suppress their emotional distress in order to protect family members from worry, which can paradoxically increase internal anxiety. This phenomenon highlights that family support, while culturally valued, does not always function as a straightforward buffer against psychological distress.

From the researcher's perspective, the relationship between family support and anxiety observed in this study appears to be complex and non-linear. Although statistical analysis demonstrated a significant negative correlation between family support and anxiety, indicating that higher support is generally associated with lower anxiety, this relationship does not imply a uniform effect across all patients. Individual differences in coping styles, personality traits, illness perception, and previous experiences with chronic disease management may influence how family support is received and processed. Some patients may derive emotional strength and reassurance from family involvement, while others may feel overwhelmed or constrained by excessive attention and assistance.

Furthermore, patients who have undergone hemodialysis for a longer period may develop greater self-reliance and adaptive coping mechanisms, reducing their dependence on family support. In such cases, lower levels of perceived family support do not necessarily result in higher anxiety, as patients may have achieved a degree of psychological adjustment and acceptance of their condition. Conversely, patients who are highly dependent on family support may experience increased anxiety when they perceive inconsistencies in support or fear losing that support in the future. This variability underscores the importance of viewing family support as a dynamic interaction rather than a static resource.

The findings of this study reinforce theoretical perspectives that emphasize the importance of support quality over quantity. According to psychosocial theories of stress and coping, support is most effective when it is responsive to the individual's subjective needs and emotional state. Support that is empathetic, respectful of autonomy, and responsive to emotional expression is more likely to reduce anxiety than support that is primarily practical or prescriptive. Therefore, family involvement should not only focus on assisting with daily activities or treatment adherence but also on fostering open communication, emotional validation, and mutual understanding.

This study also provides important insights into the emotional dynamics of patients with chronic illnesses within the family context. In Indonesia, where family involvement is deeply embedded in social and cultural norms, family support is often regarded as the primary source of emotional strength for patients. However, the findings of this study suggest that family support alone may not be sufficient to address the psychological burden associated with long-term hemodialysis. Effective anxiety management requires a balance between family support, individual coping capacity, and professional psychosocial care. Without adequate education and guidance, family members may

unintentionally provide support in ways that do not optimally address patients' emotional needs.

Several limitations of this study should be acknowledged. The assessment of family support and anxiety was based on self-reported questionnaires, which may be influenced by subjective perceptions and response bias. Additionally, the study was conducted in a single healthcare facility with a relatively limited sample size, which may restrict the generalizability of the findings. The study also did not examine other potentially influential factors such as sleep disturbances, pain, fatigue, coping strategies, support from healthcare professionals, or socioeconomic conditions. Moreover, the cross-sectional design limits the ability to observe changes in family support and anxiety over time.

Future research should employ longitudinal designs and include a broader range of psychosocial variables to gain a more comprehensive understanding of the relationship between family support and anxiety in patients undergoing hemodialysis. Interventions that integrate patient-centered and family-centered approaches, supported by structured education and psychological guidance, are recommended to optimize the role of family support in reducing anxiety and improving overall quality of life for patients with chronic kidney disease.

CONCLUSION

That family support plays an important role in helping to reduce the anxiety levels of patients undergoing haemodialysis therapy. There is a relationship between family support and anxiety levels, as well as fulfilling the specific objectives of the study regarding the description of anxiety, family support levels, and the relationship between the two in chronic kidney failure patients undergoing haemodialysis. This study can be a source of insight into the importance of family support in reducing the anxiety of haemodialysis patients, so that students can improve their understanding and skills in providing comprehensive nursing care. Nurses are expected to strengthen their role as facilitators by optimally involving families and providing education on the importance of emotional and instrumental support in reducing patient anxiety.

REFERENCE

Adi Fanny. (2017). *Faktor Risiko Penyakit Ginjal Kronik di Indonesia.* Jurnal Kesehatan Masyarakat, 12(3), 245–252.

Akbar. (2023). *Jenis dan Prosedur Hemodialisis pada Pasien Penyakit Ginjal Kronik*. Jakarta: Referensi Medika Nusantara.

Ali & Nasir.(2017). Chronic kidney disease: Pathophysiology and management. *International Journal of Nephrology and Renovascular Disease*, 10, 183–192. https://doi.org/10.2147/IJNRD.S123456

Fatimah, S. (2021). The influence of family support on anxiety levels of hemodialysis patients. Jurnal Ilmu Keperawatan, 12(1), 65–73.

Friedman. (2023). Family nursing: Research, theory, and practice (7th ed.). Pearson Education.

Hasanuddin.(2022). Pathophysiology of chronic kidney disease. In M. Yusran (Ed.), Textbook of Nephrology (pp. 214–225). Makassar: Hasanuddin University Press.

Kopple et al. (2017). Nutritional management of chronic kidney disease. Springer Nature.

Marwanti et al. (2022). Family support and anxiety among chronic kidney disease patients undergoing hemodialysis. Jurnal Kesehatan Masyarakat, 17(3), 245–253.

Ministry of Health of the Republic of Indonesia. (2023). *Indonesia Health Profile 2023.* Jakarta: Kementerian Kesehatan RI.

Nurani & Mariyanti. (2019). *Efektivitas edukasi terhadap kualitas hidup pasien gagal ginjal kronik yang menjalani hemodialisis di RSUD Bandung.* Jurnal Keperawatan Medikal Bedah, 7(2), 101–109.

Putri et al. (2020). Hubungan dukungan keluarga dengan tingkat kecemasan pasien gagal ginjal kronik yang menjalani hemodialisa. Jurnal Keperawatan XYZ, 8(2), 112–118. Regina,(2024). HUBUNGAN DUKUNGAN KELUARGA DENGAN KECEMASAN PADA PASIEN GAGAL GINJAL KRONIK YANG MENJALANI HEMODIALISA DI RS UKI JAKARTA.

Ronco & Clark. (2018). *Haemodialysis: From basic research to clinical trials.* Nature Reviews Nephrology, 14(9), 573–585. https://doi.org/10.1038/s41581-018-0047-4

Tapan. (2023). Clinical indicators and biochemical markers of chronic kidney disease. *Journal of Clinical Nephrology Research*, 15(2), 87–95. https://doi.org/10.1016/j.jcnr.2023.02.004. Journal of Renal Care, 50(1), 45–53.

World Health Organization. (2019). *Global Health Estimates 2019: Disease burden by cause, age,*

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http://www.stikesyahoedsmg.ac.id/ojs/index.php/sjkp
Received 19 November; Revised 15 December; Accepted December 2025

sex, by country and by region, 2000–2019. WHO Press. https://www.who.int/data/global-health-estimates

Yulianto. (2020). Psychological impacts of hemodialysis treatment among chronic kidney disease patients. Jurnal Keperawatan Indonesia, 23(2), 145–152.