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SELF-EFFICACY AND QUALITY OF LIFE IN PATIENTS WITH CHRONIC KIDNEY DISEASE UNDERGOING HEMODIALYSIS

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Abstract

Patients with chronic kidney disease (CKD) undergoing lifelong hemodialysis often experience declines in quality of life across physical, psychological, social, and environmental domains. The demanding treatment schedule may also lead to fatigue and reduced motivation. Self-efficacy is considered an important factor influencing patients' ability to adapt to chronic illness. This quantitative study used a descriptive correlational design with a cross-sectional approach. The population consisted of 388 patients undergoing hemodialysis, with 80 respondents selected using purposive sampling. Data were collected using the WHOQOL-BREF and General Self-Efficacy (GSE) questionnaires. Statistical analysis was performed using the chi-square test. The findings showed a statistically significant relationship between self-efficacy and quality of life ($p = 0.001$; $p < 0.05$). Patients with higher self-efficacy tended to report better quality of life across measured domains. Self-efficacy plays a crucial role in shaping patients' health behaviors and their ability to cope with long-term treatment demands. Strengthening self-efficacy may contribute to improved overall well-being in patients undergoing hemodialysis.

Keywords: Self-efficacy; Quality of life; Hemodialysis.

1. INTRODUCTION

Chronic kidney disease (CKD) is one of the most prevalent conditions worldwide, characterized by progressive kidney damage that impairs normal renal function. Patients with CKD undergoing hemodialysis may experience significant changes in physical health, psychological well-being, social functioning, and environmental conditions, all of which can adversely affect their overall quality of life (Shaw et al., 2025).

The prevalence of CKD in Asia, particularly in Southeast Asia, has shown a substantial increase, reaching approximately 66%, or an estimated 2.9 million cases within the population (Liyanage et al., 2022). In Indonesia, the prevalence of CKD is estimated at 0.38% (713,783 individuals), of whom approximately 19.33% (2,850 patients) undergo hemodialysis (Hidayangsih et al., 2023). Approximately 96% of patients with chronic kidney disease undergo hemodialysis as their primary treatment modality (Putri et al., 2024).

The prevalence of CKD in the Yogyakarta and Central Java is estimated at 0.3%, which is higher than the national average prevalence in Indonesia of 0.2%. In Central Java, the number of individuals diagnosed with CKD has reached 13,886 cases, while

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in Kudus Regency, the recorded number of CKD cases is 3,185 (Kusumastuti et al., 2025).

According to data from the North Sumatra Provincial Health Office, the number of patients with CKD reached 2,608 individuals, with the highest prevalence observed among those aged over 55 years. CKD leads to irreversible physiological changes that can no longer be managed through conservative treatment, thereby necessitating renal replacement therapy, one of which is hemodialysis (HD). Although HD can prolong survival without a clearly defined limit, it does not fully restore normal kidney function (Hustrini et al., 2022).

Patients with CKD typically undergo hemodialysis two to three times per week, with each session lasting several hours. This demanding treatment regimen may contribute to varying levels of tension, anxiety, stress, and depression among individuals. Consequently, these psychological burdens can have a negative impact on patients' overall health and quality of life (Gadia et al., 2020).

Based on previous studies, self-efficacy is a key factor that may influence the quality of life of patients with CKD. Self-efficacy functions as an indicator of patients' confidence in their ability to perform self-care and adhere to long-term treatment, with the aim of preventing further disease progression. It encompasses four supporting components: autonomy, self-integration, problem-solving, and the ability to seek social support. Self-efficacy plays a crucial role in enhancing individuals' confidence in their capacity to manage their condition effectively (Riski et al., 2025).

An individual's quality of life can be influenced by their level of self-efficacy. Patients with CKD often experience diminished confidence in their ability to cope with the challenges associated with their condition. Self-efficacy is defined as the belief that shapes how individuals think, motivate themselves, and ultimately decide to engage in behaviors necessary to achieve desired outcomes. Patients who have strong confidence in their ability to perform self-care are more likely to adhere to required health-related tasks. Therefore, individuals with higher levels of self-efficacy are better equipped to manage their responsibilities and cope effectively with their condition (Lai et al., 2021). Based on the aforementioned background, this study was conducted to examine the relationship between self-efficacy and quality of life among patients with chronic kidney disease undergoing hemodialysis.

2. METHOD

This study employed a descriptive correlational design with a cross-sectional approach. Data collection involved both primary and secondary data sources. Primary data were obtained directly from respondents using questionnaires, including the World Health Organization Quality of Life-BREF (WHOQOL-BREF), which consists of 26 items, and the General Self-Efficacy (GSE) questionnaire, consisting of 10 items. Data were collected from patients with chronic kidney disease undergoing hemodialysis at the hemodialysis unit of Sembiring General Hospital, Deli Tua, in 2024. Secondary data were obtained from patient observation records of individuals with chronic kidney disease undergoing hemodialysis at the same hospital. The target population consisted of all hemodialysis patients at Sembiring

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General Hospital, totaling 80 patients. The sample included all patients who met the inclusion criteria and were willing to participate, resulting in a total of 80 respondents. A purposive sampling technique was applied. Data were analyzed using the chi-square test with a 95% confidence level (α = 0.05).

3. RESULTS

Table 1. Frequency Distribution of Demographic Characteristics of Hemodialysis Patients

Variable	n	%
Gender		
Female	36	55.0
Male	44	45.0
Total	80	100.0
Age (years)	32	40.0
30–50		
51–70	48	60.0
Total	80	100.0
Education	25	31.3
Primary School	30	37.4
Junior High	25	31.3
Senior High	80	100.0
Total	30	37.4
Occupation		
Factory Worker	27	33.8
Trader	14	17.4
Housewife	27	33.8
Farmer	12	15.0
Total	80	100.0
Duration of HD (years)		
1–3	48	60.0
4–6	32	40.0
Total	80	100.0

Based on Table 1, the majority of respondents were female (55.0%) and aged between 51–70 years (60.0%). Most participants had a junior high school level of education (37.4%). In terms of occupation, the largest proportions were factory workers and housewives (33.8% each). Additionally, most respondents had been undergoing hemodialysis for 1–3 years (60.0%).

Table 2. Frequency Distribution of Self-Efficacy and Quality of Life among Hemodialysis Patients

Variable	n	%
Self-Efficacy		
Low	15	18.8
Moderate	28	35.0
High	37	46.2
Total	80	100.0
Quality of Life	34	42.5
High		
Moderate	33	41.3
Low	13	16.2
Total	80	100.0

Based on Table 2, the majority of respondents had high self-efficacy (46.2%). Similarly, most respondents reported a high quality of life (42.5%), followed closely by those with moderate quality of life (41.3%).

Table 3. Association between Self-Efficacy and Quality of Life Among Hemodialysis Patients at Sembiring General Hospital, Deli Tua

Self-Efficacy	Quality of Life						Total		p-value
	High		Moderate		Low				
	n	%	n	%	n	%	n	%	
Low	0	0,0	3	3,8	12	15	15	18,8	0,019*
Moderate	10	12,5	17	21,3	1	1,3	28	35	
High	24	30,0	13	16,3	0	0,0	37	46,3	
Total	34	42,5	33	41,3	13	16,3	80	100	

*Chi-square

Based on Table 3, the cross-tabulation analysis demonstrates a clear pattern between self-efficacy and quality of life among hemodialysis patients. Among respondents with low self-efficacy, the majority were categorized as having low quality of life

(15.0%), with none reporting high quality of life. In contrast, respondents with moderate self-efficacy were predominantly distributed in the moderate quality of life category (21.3%), followed by those with high quality of life (12.5%), and only a small proportion in the low category (1.3%). Furthermore, respondents with high self-efficacy were largely associated with high quality of life (30.0%), with no respondents falling into the low quality of life category.

Overall, these findings indicate that higher levels of self-efficacy are associated with better quality of life outcomes. The chi-square test results showed a statistically significant relationship between self-efficacy and quality of life ($p = 0.019$; $p < 0.05$), suggesting that self-efficacy plays an important role in influencing the quality of life among patients undergoing hemodialysis.

4. DISCUSSION

These findings indicate that a substantial proportion of patients possess a relatively high level of confidence in their ability to manage their condition. This is reflected in patients' reported ability to control their emotions during challenges associated with hemodialysis, cope with their illness, manage problems encountered during treatment, and identify appropriate solutions when facing difficulties.

Theoretically, individuals with low self-efficacy tend to underestimate their abilities and perceive tasks as burdensome, which may reduce their motivation to engage in health-promoting behaviors. Self-efficacy not only influences health-related behaviors but also shapes cognitive processes, particularly among patients with chronic illnesses. Individuals with low self-efficacy are more likely to demonstrate lower commitment to their goals and reduced capacity to cope effectively with their condition (Paersch et al., 2025). This highlights the importance of enhancing self-efficacy as a key factor in improving patients' ability to adapt to long-term treatment and maintain their overall well-being.

Social support plays a crucial role in helping patients cope with the hemodialysis process, as it provides emotional reassurance and a sense of being cared for. Patients who perceive strong support from their surroundings tend to feel more valued and motivated in managing their condition (Sułkowski et al., 2024).

These findings are consistent with previous studies. Saedi et al. (2024) reported that the majority of patients undergoing hemodialysis demonstrated a high level of quality of life, emphasizing the importance of social and emotional support in maintaining well-being. Similarly, Theodoritsi et al. (2016) found that most patients had a moderate to high quality of life, which was strongly influenced by support from family, relatives, and significant others. This support contributes to patients' psychological stability and enhances their ability to adapt to the long-term demands of hemodialysis. Therefore, the present study reinforces existing evidence that social support is a key determinant of quality of life among patients with chronic kidney disease undergoing hemodialysis.

Based on the chi-square statistical test conducted using SPSS version 16.0, the level of significance obtained was $p = 0.019$ ($p \leq 0.05$). This indicates a statistically significant relationship between self-efficacy and

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quality of life among patients with chronic kidney disease undergoing hemodialysis at Sembiring General Hospital, Deli Tua. The findings suggest that higher levels of self-efficacy are associated with better quality of life among these patients.

The findings of this study are consistent with those reported by Jafarzadeh et al. (2025), who found a significant relationship between self-efficacy and quality of life among patients with chronic kidney disease undergoing hemodialysis (ρ = 0.001 < α = 0.05). This result indicates a strong association between self-efficacy and patients' quality of life. The study further highlights that self-efficacy and quality of life are closely interconnected in the context of hemodialysis therapy. Patients who are unable to adapt to their illness are more likely to experience a decline in their quality of life. Self-efficacy plays a crucial role in self-management and the maintenance of health-related behaviors. Therefore, higher levels of self-efficacy are believed to enhance patients' ability to cope with challenges during the treatment process, increase motivation for recovery, and ultimately improve their overall quality of life.

The findings of this study are consistent with those reported by Moghaddam et al. (2024), who examined the relationship between self-efficacy and quality of life among breast cancer patients at H. Adam Malik General Hospital, Medan. The study demonstrated a statistically significant association between self-efficacy and quality of life, with a Spearman rank test yielding a p-value of 0.026 (p < 0.05). Similarly, this study aligns with the research conducted by Rusni et al. (2020), which investigated the relationship between self-efficacy and quality of life among patients with type II diabetes mellitus at Labuang Baji Regional Hospital, Makassar. The findings indicated a significant relationship between self-efficacy and quality of life, as evidenced by the chi-square test result showing a p-value of 0.001 (p < 0.05). These findings further support the notion that self-efficacy is an important determinant of quality of life across various chronic disease conditions.

5. CONCLUSION

This study demonstrates a significant relationship between self-efficacy and quality of life among patients with chronic kidney disease undergoing hemodialysis at Sembiring General Hospital, Deli Tua. Patients with higher levels of self-efficacy tend to have better quality of life. These findings highlight the importance of enhancing self-efficacy to improve patients' ability to cope with long-term treatment and maintain overall well-being. ased on the findings of this study, it is recommended that healthcare providers, particularly nurses, develop and implement interventions aimed at enhancing patients' self-efficacy, such as health education, counseling, and self-management programs. Strengthening self-efficacy may improve patients' ability to cope with the demands of hemodialysis and ultimately enhance their quality of life. Hospitals are also encouraged to provide continuous psychosocial support, including family involvement and peer support groups, to help patients adapt to long-term treatment. Future researchers are advised to explore additional factors influencing quality of life and to use larger sample sizes or longitudinal designs to obtain more comprehensive results

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