

Self-Efficacy and Quality of Life Chronic Kidney Disease Patients Undergoing Hemodialysis

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ABSTRACT

Hemodialysis is routinely administered to patients with end-stage renal failure, typically 2 to 3 times a week, to support their survival. Nevertheless, this regular treatment can lead to various physical, psychological, and socio-economic challenges for patients, which undoubtedly influence their quality of life. Additionally, self-efficacy is thought to play a role in affecting the quality of life of these patients. The aim of the research was to determine the relationship between self-efficacy and quality of life in chronic kidney failure patients. The research method is descriptive correlation with a cross-sectional approach and using a purposive sampling method on 50 respondents at Prof Dr. R. D Kandou Hospital Manado. The data collection process uses *questionnaire* Self-efficacy and *questionnaire* Kidney Disease Quality of Life-Short form (KDQOL SF) and analyzed the data using SPSS version 23.0 with the Pearson correlation. Finding of the study the description of the self-efficacy patients with chronic renal failure there are 33 (66%) respondents in the high category, 15 (30%) respondents in the moderate category, 1 (2%) respondent in the low category, 1 (2%) respondent in the very high category, and no patients in the very low category, For Quality of life 26 (52%) were in the sufficient category, 20 (40%) were in the poor category, and 4 (8%) were in the good category, and there is a relationship between self-efficacy and quality of life with p value 0,00 with medium strength of relationship and the direction of the relationship being positive, namely the higher the self-efficacy, the higher quality of life. Study provides clear information about the importance of self-efficacy for patients undergoing hemodialysis therefore, health workers must collaborate with patients and families to increase the patients' self-efficacy so that their quality of life improves.

Keywords: Chronic Kidney Disease, Hemodialysis, Quality of Life, Self-efficacy

INTRODUCTION

Chronic Kidney Disease (CKD) has become an increasingly significant global health issue (Pugh et al., 2019). According to the Centers for Disease Control and Prevention (CDC), it is estimated that 37 million people in the United States have CKD, with approximately 71% undergoing hemodialysis (Centers for Disease Control and Prevention in the United States, 2021). In Indonesia, there are 252,124,458 people with CKD, and 60% of them undergo hemodialysis (Ministry of Health of the Republic of Indonesia, 2018). Meanwhile, the

prevalence of CKD in North Sulawesi is 5% of the total population of Indonesia, which is 267.1 million people (Mait et al., 2021).

Haemodialysis is a type of kidney replacement therapy when the kidneys are no longer functioning properly. Patients undergo haemodialysis two to three times a week, with each session lasting three to four hours (Suciana et al., 2020) With the explanation and motivation provided by nurses about haemodialysis therapy, patients are more likely to accept the changes, which can lead to an improvement in their quality of life (Wiliyanarti & Muhith, 2019).

Quality of life is a state in which an individual experiences satisfaction or pleasure in their daily life, related to physical health, psychological well-being, social interactions, and environmental conditions. When a person is physically and mentally healthy, they are more likely to achieve their goals with a sense of fulfillment in life (Suwanti et al., 2017) Patients undergoing hemodialysis often face physical, psychological, social, and lifestyle challenges that impact their quality of life (Kurniawati & Asikin, 2018). The quality of life of these patients tends to decrease due to changes across various dimensions during hemodialysis therapy, such as discomfort, low self-esteem, and even withdrawal from their social environment (Rohmaniah & Sunarnom, 2022). One factor that can help improve the quality of life for patients with chronic kidney disease is self-efficacy. Individuals with chronic kidney disease who can adapt to their condition are likely to achieve a better quality of life (Asnaniar et al., 2020).

Self-efficacy is an individual's belief in their ability to perform activities or tasks in daily life, including their confidence in overcoming obstacles to achieve a goal (Bandura, 2009). Self-efficacy can help a person make desired choices and commit to maintaining actions and goals (Rohmaniah & Sunarno, 2022). Individuals with low self-efficacy may experience problems during hemodialysis, such as non-compliance with the treatment or difficulty adapting to the therapy, which can impact their treatment process (Wakhid et al., 2018). According to Bandura's (2009) theory of self-efficacy, self-efficacy refers to an individual's confidence in their ability to perform tasks and achieve goals aimed at improving health.

Data were collected during a visit to the Melati Haemodialysis Unit at Prof. Dr. R. D. Kandou General Hospital in Manado on December 20, 2023, for a preliminary study. The researcher directly observed the dialysis process and interviewed 3 male patients. It was found that 2 respondents had very high self-efficacy and 1 respondent had high self-efficacy. However, the quality of life for 2 respondents was poor and 1 respondent's quality of life was adequate. Self-efficacy and quality of life in patients undergoing haemodialysis have never been studied, therefore the aim of the research is to determine the relationship between self-efficacy and quality of life in patients with chronic kidney disease.

LITERATURE REVIEW

Chronic kidney disease (CKD) is a prevalent condition characterized by the gradual loss of kidney function, often necessitating hemodialysis for patients with end-stage renal disease. Hemodialysis is a critical treatment that helps sustain life but can significantly impact patients' quality of life (QoL). Self-efficacy, or an individual's belief in their ability to execute

behaviors necessary to produce specific performance attainments, has been identified as a crucial factor influencing patients' outcomes in various chronic conditions, including CKD.

Self-efficacy, as defined by Bandura, (2009), is the belief in one's capacity to execute behaviors necessary to manage prospective situations. In the context of CKD and hemodialysis, self-efficacy can influence how patients cope with their condition and adhere to treatment regimens. Research indicates that higher self-efficacy is associated with better adherence to treatment and improved health outcomes (McDonald, Macleod, & Baillie, 2015)

A study by Lio & Lee, (2017) found that CKD patients with higher self-efficacy experienced less psychological distress and better self-management of their condition. This aligns with the findings of Kimmel, et al (2019), who demonstrated that self-efficacy was positively correlated with better adherence to dialysis protocols and fewer hospitalizations.

Quality of life in hemodialysis patients is multifaceted, encompassing physical, emotional, and social dimensions. Patients undergoing hemodialysis often face challenges such as fatigue, depression, and social isolation, which can adversely affect their QoL (Kimmel et al., 2019). The impact of hemodialysis on QoL has been extensively studied, with findings consistently showing that patients experience diminished QoL compared to the general population (Rohmaniah & Sunarno, 2022)

A recent study by Zang et al. (2020) highlighted that patient with higher self-efficacy reported better QoL scores, particularly in the domains of physical functioning and emotional well-being. Similarly, a study by Hsu, H, & Lee, (2021) revealed that interventions aimed at improving self-efficacy, such as educational and psychological support, led to significant improvements in QoL among hemodialysis patients.

The relationship between self-efficacy and QoL in CKD patients undergoing haemodialysis has been the subject of considerable research. Evidence suggests that higher self-efficacy is associated with better QoL, as it helps patients manage the daily challenges of living with CKD more effectively (Chen, Liu, & Chiu, 2018). According to a study by Ali et al. (2022), patients with higher self-efficacy are more likely to engage in positive health behaviours, which can lead to improved physical and psychological well-being. A meta-analysis by Li et al. (2023) supports these findings, showing that self-efficacy interventions can positively impact QoL in CKD patients by enhancing their ability to cope with the demands of dialysis treatment and improving overall satisfaction with life.

METHOD

Research design is a planned and organized framework for conducting studies to obtain the necessary data and further examine newly discovered facts. This study employs a quantitative design with a cross-sectional approach, which involves comparing variables that cannot be manipulated using a single measurement taken at one point in time. The study aims to describe self-efficacy and quality of life using frequency and percentage, while the relationship between self-efficacy and quality of life is analyzed using Pearson correlation. The population for this study consists of male patients undergoing haemodialysis. The sampling

technique used is non-probability sampling, specifically purposive sampling. This method involves selecting samples based on specific criteria and considerations (Sugiyono & Puspandhani, 2020).

The inclusion criteria for this study are: a) all male patients undergoing haemodialysis for ≤ 12 months at the Melati Haemodialysis Unit, Prof. Dr. R. D. Kandou General Hospital, Manado, and b) willingness to participate as respondents by signing the informed consent form provided. The exclusion criteria are: a) unwillingness to participate, b) inability to read, c) hearing impairment, and d) reduced level of consciousness ($GCS \leq 13$).

Data collection was conducted from March 13 to March 28, 2024, with a total of 50 patients participating. The research instruments used included a self-efficacy questionnaire adopted from (Pradnyanswari & Rustika, 2020) and a quality of life questionnaire (Vasilieva & Smirnov, 2017), which was translated into Indonesian by Supriyadi et al. (2019). The instruments were distributed to respondents with a structured set of questions designed to gather information.

The self-efficacy questionnaire comprised 38 items using a Likert scale and was interpreted across five categories: very low (<66.5), low (≤ 85.5), moderate (≤ 104.5), high (≤ 123.5), and very high (>123.5). The quality of life instrument utilized a Likert scale and Guttman scale with 26 items divided into 80 questions. The resulting scores were converted to mean values based on respondents' answers, categorized into three sections: good (76-100), sufficient (60-75), and poor (<60).

RESULTS AND DISCUSSION

The analysis conducted to determine the description and relationship between self-efficacy and quality of life in patients with chronic kidney disease at Prof. Dr. R. D. Kandou General Hospital, Manado, revealed the results and discussion for each variable.

Table 1
Description Self-Efficacy

Category	Frequency	Percentage (%)
Very low	0	0
Low	1	2
Medium	15	30
Height	33	66
Very Hight	1	
N	50	100

Source: Calculated by Authors

Table 1 shows that out of 50 respondents, 33 (66%) fall into the high self-efficacy category, 15 (30%) are in the moderate category, 1 (2%) is in the low category, 1 (2%) is in the very high category, and no patients are classified in the very low category. Thus, chronic kidney disease (CKD) patients generally exhibit high self-efficacy.

These results are like those found by Asnaniar et al. (2020), where 20 (66.7%) respondents were categorized as having high self-efficacy, despite different respondent characteristics. Similarly, the study by (Welly & Rahmi, 2021) reported that 23 (69.6%) respondents had high self-efficacy. High self-efficacy is associated with better self-care management, leading to greater adherence to hemodialysis therapy and treatment, which plays a crucial role in enhancing the quality of life for individuals.

Table 2
Description Quality of Life

Category	Frequency	Percentage (%)
Poor	20	40
Sufficient	26	52
Good	4	8
N	50	100

Source: Calculated by Authors

Table 2 shows the quality of life assessment for 50 respondents: 26 (52%) fall into the sufficient category, 20 (40%) are in the poor category, and 4 (8%) are in the good category. Thus, the majority of chronic kidney disease (CKD) patients undergoing haemodialysis have a sufficient quality of life.

This finding is consistent with the research conducted by Mariana and Astutik (2018), which, despite different respondent characteristics, also found that 39 (53.4%) of CKD patients had a sufficient quality of life, indicating that patients are gradually adjusting to haemodialysis therapy. Similarly, Sagala and Pasaribu (2018) reported that 44 (55.7%) of respondents had a quality of life categorized as sufficient.

Table 3
The Relationship Between Self-Efficacy and Quality of Life

Variable	N	R	p-Value	Interpretation
Self-Efficacy	50	0.545	0.00***	There is a relationship
Quality of Life				

*At the 10%, 5%, and 1% levels, respectively, the regression coefficient is significantly different from zero, as indicated by the t statistics in parenthesis * $p < 0.10$, ** $p < 0.05$, and *** $p < 0.01$.*

Source: Calculated by Authors

Using Pearson correlation, a p-value of 0.00 was obtained, as shown in Table 3. This indicates that $p\text{-value} \leq 0.05$, meaning there is a significant relationship between self-efficacy and quality of life. The correlation coefficient of 0.545 suggests a moderate positive relationship between the two variables; in other words, higher self-efficacy is associated with a higher quality of life, and vice versa.

Similar findings were reported by Asnaniar et al. (2020) in their study at a hospital in Makassar, where a significant relationship was found with a p-value of 0.000. Likewise, the research conducted by Welly and Rahmi (2021) also identified a significant relationship between self-efficacy and quality of life.

Self-efficacy refers to an individual's belief in their ability to achieve self-care tasks and obtain desired outcomes, influencing their mindset and motivation (Hanafi et al., 2020). According to the analysis of responses to the self-efficacy statements, for statement 17, 36 out of 50 respondents agreed that once they decide to complete a task, they will persist until it is done. Similarly, for statement 21, 23 respondents disagreed, indicating they do not easily give up. For statement 22, 34 respondents agreed that failure motivates them to try harder. This indicates that the majority of CKD patients have high self-efficacy.

Quality of life is an individual's perception of their overall well-being in daily life, related to their goals or expectations, standards, and satisfaction or dissatisfaction with achieving those goals. As individual well-being increases, so does their quality of life (Nurlina, 2021) on the analysis, in the physical health domain for statement 2, 26 respondents reported that their health is much better than the previous year. In the psychological health domain for statement 11d, 28 respondents felt their health was very good. In the social relationships domain, for statement 13e, 37 respondents reported having good social interactions with others. In the environmental domain, for statement 24a, 37 respondents agreed that the haemodialysis staff supports them in maintaining optimal health. Therefore, the quality of life for CKD patients is categorized as sufficient.

CONCLUSION, IMPLICATION, SUGGESTION, AND LIMITATIONS

Based on the results, the profile of self-efficacy among CKD patients undergoing hemodialysis is predominantly high, followed by moderate, low, and very high categories. The quality of life for CKD patients on hemodialysis is mostly categorized as sufficient, with some in the poor and good categories. There is a moderate positive correlation between self-efficacy and quality of life, meaning that as self-efficacy increases, the quality of life of CKD patients undergoing hemodialysis also improves.

The research highlights a significant positive relationship between self-efficacy and quality of life in CKD patients undergoing hemodialysis. This suggests that patients who have higher self-efficacy, who believe in their ability to manage their treatment and health tend to experience a better quality of life. Health professionals should therefore focus on strategies to enhance patients' self-efficacy. This can be achieved through patient education, skills training, and emotional support that empowers patients to take control of their health management. Programs aimed at boosting self-efficacy could include self-management workshops, motivational interviewing, and regular follow-ups to reinforce positive behaviors and coping strategies.

Develop targeted self-efficacy enhancement programs: Create and implement specific programs designed to boost self-efficacy among patients undergoing hemodialysis. These

programs should include educational workshops: Offer regular workshops that educate patients about managing their condition, understanding their treatment, and setting realistic health goals, skill-building sessions: Conduct practical sessions to teach self-care skills, such as managing dietary restrictions, monitoring symptoms, and administering medications. Integrate psychological support into care plans: Incorporate psychological support as a routine part of the care plan for patients. This could include counseling services: Provide access to counseling or therapy to help patients build confidence and resilience in managing their health. Support groups: Facilitate support groups where patients can share experiences and strategies, helping each other enhance their self-efficacy.

Limited Sample Size: The study involved a relatively small sample size of 50 respondents. This limited sample may not fully represent the diverse population of CKD patients undergoing hemodialysis across different regions or healthcare settings. Findings from this sample may not be generalizable to all CKD patients, especially those from different geographical locations or demographic backgrounds. The cross-sectional design of the study provides a snapshot of self-efficacy and quality of life at a single point in time. This design does not allow for the assessment of changes over time or the causal relationships between self-efficacy and quality of life.

ACKNOWLEDGEMENT

First and foremost, our deepest thanks go to the participants of this study, the patients undergoing hemodialysis at RSUP Prof. Dr. R. D. Kandou Manado, whose willingness to participate and share their experiences made this research possible. Special thanks are due to the staff of the hemodialysis unit at RSUP Prof. Dr. R. D. Kandou Manado for their assistance in facilitating data collection and for their continued dedication to patient care.

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11th ISC 2024 (Universitas Advent Indonesia, Indonesia)

“Research and Education Sustainability: Unlocking Opportunities in Shaping Today's Generation Decision Making and Building Connections” October 22-23, 2024

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