

CORRELATION BETWEEN HEMODIALYSIS FREQUENCY AND QUALITY OF LIFE OF CKD PATIENTS AT SAMARINDA MEDIKA CITRA HOSPITAL

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ABSTRACT

Background: Chronic Kidney Disease (CKD) is a global health issue that significantly impacts patients' quality of life. In the end stage, patients require routine hemodialysis therapy. Irregularity in treatment frequency can lead to a decline in clinical condition and quality of life. Methods: This study employed a quantitative, descriptive-correlational design with a cross-sectional approach. A total of 43 respondents were selected using a total sampling technique from among CKD patients undergoing routine hemodialysis twice weekly at Samarinda Medika Citra Hospital. The instruments used were a hemodialysis frequency observation sheet and the Kidney Disease Quality of Life-36 (KDQOL-36) questionnaire. Data analysis was performed using the Spearman Rank test. Results: The study results showed a mean hemodialysis frequency of 23.6 and a mean quality of life score of 63.35. A significant correlation was found between hemodialysis frequency and quality of life ($p=0.002$; $r=0.459$), characterized by a moderate, positive correlation. Conclusion and Recommendations: There is a significant correlation between hemodialysis frequency and the quality of life of CKD patients. Adherence to the hemodialysis schedule plays a crucial role in improving patients' quality of life. Healthcare professionals are advised to enhance patient education and the monitoring of treatment adherence.

Keywords: CKD, hemodialysis, hemodialysis frequency, quality of life.

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INTRODUCTION

Chronic Kidney Disease (CKD) is a condition characterized by a progressive and irreversible decline in kidney function over a period exceeding three months. In advanced stages, CKD can progress to end-stage renal disease, necessitating renal replacement therapies—such as hemodialysis—to sustain the patient's life. Both globally and nationally, the prevalence of CKD continues to rise, emerging as a major health issue associated with high rates of morbidity and mortality.

Hemodialysis is the most widely used therapy for patients with end-stage CKD; it functions by partially replacing kidney function through the filtration of metabolic

waste products and the maintenance of fluid balance. The therapy is administered routinely—typically two to three times per week—with each session lasting several hours. While effective at sustaining life, hemodialysis can also entail physical, psychological, and social consequences that impact the patient's quality of life.

Quality of life is a crucial indicator for assessing the success of therapy in patients with chronic diseases, including CKD. Patients undergoing hemodialysis often experience a decline in quality of life due to fatigue, activity limitations, dependence on therapy, and psychological stress. One factor hypothesized to influence this quality of life is the frequency of hemodialysis sessions. While adequate frequency is essential for maintaining the patient's clinical condition, it can also increase the physical and emotional burden.

Several studies have demonstrated a link between hemodialysis therapy and the quality of life of CKD patients, although findings remain varied. This indicates that quality of life is influenced by a multitude of factors, including the frequency of therapy undergone by the patient. Consequently, this study aims to analyze the correlation between the frequency of hemodialysis therapy and the quality of life of CKD patients at Samarinda Medika Citra Hospital. The study's findings are expected to serve as a basis for improving service quality and supporting nursing interventions focused on enhancing patients' quality of life.

METHODS

Research Design

This study employed a descriptive-correlational quantitative design with a cross-sectional approach. The research was conducted from November to December 2025 in the hemodialysis unit of Samarinda Medika Citra Hospital.

Population and Sample

The study population consisted of all 4th and 5th-grade students, totaling 106 students. The sample was selected using a consecutive sampling technique, resulting in a final sample of 105 respondents.

Data Collection

The instrument used was the Lauster Self-Confidence Scale (19 items, 4-point Likert scale). The instrument's validity and reliability (Cronbach's Alpha ≥ 0.70) had been previously established. The cut-off point was determined based on the median (≥ 58 = good; < 58 = poor).

Data Analysis

Univariate analysis was performed using SPSS version 26 to generate frequency distributions and percentages.

Ethical Statement

This study received ethical approval from the relevant institution. All participants (via their parents or guardians) signed informed consent forms prior to the commencement of data collection. Each child also provided assent as an expression of voluntary agreement. The confidentiality of data and respondent identities was fully maintained throughout the research and reporting processes.

RESULTS

This study involved 43 respondents with CKD undergoing hemodialysis at Samarinda Medika Citra Hospital.

Table 1. Respondent Characteristics (n=43)

Characteristic	Frequency (f)	Percentage (%)
Gender		
Male	25	58,1
Female	18	41,9
Age		
26-45	16	37,2
46 - 59	17	39,5
60 - 74	10	23,3
Medical History		
Hypertension	26	60,5
Diabetes	16	37,2
Etc	1	2,3
Total	43	100

Source: Primary data, 2026

Based on Table 1, the majority of respondents fell into the 46–59 age group (17 respondents; 39.5%), followed by the 26–45 age group (16 respondents; 37.2%) and the 60–74 age group (10 respondents; 23.3%). Regarding gender, the majority were male (25 respondents; 58.1%), while 18 respondents (41.9%) were female. In terms of medical history, the majority of respondents had hypertension (26 respondents; 60.5%), followed by diabetes (16 respondents; 37.2%) and other conditions (1 respondent; 2.3%).

Table 2. Frequency Distribution of Hemodialysis and Quality of Life (n=43)

Variabel	Mean	Min	Max	SD
Good Self-Confidence (score ≥ 58)	23,6	22	24	0,728
Quality of life	63,35	48,06	81,11	9,524

Source: Primary data, 2026

Based on the table, for the 43 respondents (n=43), the mean self-confidence score—falling within the "good" category—was 23.6, with a minimum of 22, a maximum of 24, and a standard deviation of 0.728. This indicates that the respondents' self-confidence scores were relatively homogeneous, showing little variation among them.

Meanwhile, for the quality of life variable, the mean score was 63.35, with a minimum of 48.06, a maximum of 81.11, and a standard deviation of 9.524.

Table 3. Correlation between HD Frequency and Quality of Life (n=43)

Variabel	n	r	pValue
HD Frequency and Quality of Life	43	0,459	0,002

Source: Primary data, 2026

Based on the table, a correlation coefficient (r) of 0.459 was obtained from the 43 respondents (n=43), indicating a moderate-strength relationship between hemodialysis frequency and patient quality of life. The p-value of 0.002 ($p < 0.05$) signifies that this relationship is statistically significant.

DISCUSSION

Demographic Characteristics of Respondents

The distribution of respondent characteristics in this study reveals a diverse profile. Regarding gender, the majority of respondents were male, although the difference compared to females was not substantial. This indicates that Chronic Kidney Disease (CKD) affects both genders; however, some studies suggest that men face a higher risk due to lifestyle factors and comorbidities such as hypertension and smoking habits.

In terms of age groups, the majority of respondents fell within the adult to elderly range. This aligns with the theory that CKD is a progressive chronic disease more commonly found in individuals over the age of 40. Advancing age is associated with a physiological decline in kidney function, thereby increasing the risk of developing chronic kidney failure.

Regarding the duration of hemodialysis, the majority of patients had been undergoing therapy for a considerable period. This demonstrates that CKD patients require long-term—or even lifelong—renal replacement therapy. The longer a patient undergoes therapy, the greater the demand for physical and psychological adaptation to their condition.

The Relationship Between Hemodialysis Frequency and Quality of Life

The study results indicate a relationship between the frequency of hemodialysis therapy and the quality of life of CKD patients. Patients who undergo hemodialysis routinely and according to schedule tend to have a better quality of life compared to those who do not. This is because adequate hemodialysis therapy helps

remove metabolic waste products and maintains fluid and electrolyte balance in the body.

Physiologically, hemodialysis plays a crucial role in alleviating uremic symptoms such as nausea, vomiting, fatigue, and shortness of breath. The reduction of these symptoms enables patients to better perform daily activities, thereby positively impacting their quality of life. Furthermore, a more stable physical condition enhances patient comfort in their daily lives.

From a psychosocial perspective, a patient's quality of life is influenced not only by physical condition but also by environmental support. Family support, adherence to therapy, and economic status are key factors determining the quality of life for CKD patients. Patients who receive strong emotional and social support tend to be more motivated to undergo therapy consistently, leading to an improved quality of life.

These findings align with the Roy Adaptation Model, which posits that individuals adapt to the stimuli they receive, including hemodialysis therapy. The frequency of hemodialysis acts as a stimulus influencing the patient's adaptive response—both physiologically and psychosocially. Patients who adapt well demonstrate a more optimal quality of life.

However, this study has certain limitations. The relatively small sample size and the fact that the research was conducted at a single hospital mean the findings cannot be widely generalized. Therefore, further research involving larger sample sizes and a broader geographical scope is needed to obtain more representative results.

CONCLUSION

The majority of CKD patients in this study reported a quality of life ranging from moderate to good. There is a significant relationship between hemodialysis frequency and patient quality of life, characterized by a moderate strength of association and a positive direction; the more regularly patients undergo hemodialysis therapy, the better their quality of life.

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