

# Quality of Life of Hemodialysis Patients in the Sidikalang Regional General Hospital

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## ABSTRACT

Patients undergoing hemodialysis have become a health problem that is becoming a trend in society, where the prevalence is increasingly high. Hemodialysis is very important as a treatment therapy but not as a therapy to cure. The impact of hemodialysis therapy is that patients are vulnerable to emotional problems such as stress related to restrictions on diet and fluid intake, physical limitations, disease conditions, drug side effects, and dependence on dialysis. This research aims to describe the quality of life of hemodialysis patients. The type of research used was a descriptive survey, carried out at Sidikalang District Hospital, Dairi Regency. The population of this study was 42 hemodialysis patients. The sampling technique includes total sampling and an accidental sampling approach. Data analysis using univariate analysis to describe the quality of life of hemodialysis patients. The results showed that the majority of hemodialysis patients' quality of life was moderate, with 34 people (80.96%); each quality of life aspect domain shows that the majority in the physical health domain is poor with 25 people (59.52%), the majority in the psychological domain is poor with 31 people (73.80%), the majority in the social relations domain is good with 20 people (47.61%), and the environmental domain has a bad majority of 20 people (47.61%). Health workers in the hemodialysis unit are expected to play a role in providing health education about maintaining the physical, and psychological health, social relationships, and environment of hemodialysis patients through leaflets or watching educational videos during the process.

**Keywords:** quality of life, patients, hemodialysis

## INTRODUCTION

Currently, patients undergoing hemodialysis have become a health problem that is becoming a trend in society, where the prevalence is increasingly high. Twenty years ago, hemodialysis services were not yet a basic requirement in regional or district-level hospitals. Still, the situation is different from today, where this service has become a vital need for patients who need hemodialysis therapy. This is due to the demands of public health needs, with the increasing incidence of chronic kidney failure requiring hemodialysis therapy. Chronic kidney failure requiring dialysis or a kidney transplant is ranked 12th as a cause of death worldwide, with around 850,000 people dying every year (World Health Organization, 2015).

Data from Basic Health Research in 2018 shows the prevalence of patients undergoing hemodialysis for chronic kidney disease reached 19.33%. In North Sumatra, the prevalence of

hemodialysis due to chronic kidney disease reached 11.57% according to the Ministry of Health in 2019 (Indonesian Ministry of Health, 2018). Based on data obtained from the Sidikalang Regional General Hospital in 2024 the total number of patients undergoing hemodialysis therapy was 42 people.

Hemodialysis is a kidney function replacement treatment that is scheduled 2-3 times a week, each with a duration of 4-5 hours, to rebalance disturbed fluids and electrolytes and eliminate metabolic protein waste (Silaen et al., 2023). Patients who undergo hemodialysis regularly to maintain their lives may also face additional factors that negatively affect their quality of life compared to other individuals, such as excessive emotional problems, lack of cooperation, physical suffering, as well as social difficulties in interactions and daily activities. days, which is also accompanied by high costs. Overall, this has a significant impact on their quality of life (Smeltzer, 2018). The patient's quality of life on hemodialysis is improved by ensuring the care of transitory patients is reviewed and standardized (Alcalde-Bezhold et al., 2021).

Quality of life refers to an individual's perception of their life circumstances, which is influenced by cultural context, value systems, and relationship to life goals, expectations, standards, and other factors. This includes various aspects, such as physical health problems, psychological conditions, level of freedom, social interactions, and the environment in which the individual lives (World Health Organization, 2014). The quality of life for hemodialysis patients is significantly influenced by their number of comorbidities, requiring effective management to enhance their overall well-being (Yonata et al., 2022). The quality of sleep significantly impacts the quality of life in hemodialysis patients (Calisanie & Gunadi, 2021).

The quality of life of hemodialysis patients often decreases, this was proven in research by Putri Wahyuni et al, in 2018 regarding the relationship between the length of time undergoing hemodialysis and the quality of life of chronic kidney disease patients with diabetes mellitus at RSUP Dr. M Djamil Padang was found in 31 respondents, 18 of whom had a poor quality of life (Wahyuni., 2018). The results of research by Suwanti, et al in 2017 regarding the description of the quality of life of chronic kidney failure patients undergoing hemodialysis therapy at the Semarang Regency Regional Hospital, the results showed that the majority of patients had a poor quality of life. the poor, with a percentage of 61.0%, while 39.0% have a good quality of life. When viewed from various domains, physical health (56.1%) and psychological health (58.5%) are poor, but social relationships (51.2%) and the environment (53.7%) show good (Suwanti et al., 2017).

An initial survey was conducted by conducting interviews with 5 patients who were currently undergoing hemodialysis. Information obtained from measuring the physical health domain for each patient showed that they experienced cramps in their fingers, and felt weak and dizzy after hemodialysis which interfered with travel. came home, and the skin felt itchy. In the psychological domain, three patients initially experienced negative thoughts about their lives when starting the hemodialysis process, such as questions about why they had to undergo this treatment, whether their lifespan would be reduced because of this treatment, & how much they would have to pay for their treatment. Meanwhile, two other patients felt uncomfortable with the change in their appearance because their skin had darkened. In terms of environment and social relationships, three patients stated that they could still interact with other people well, although two of them felt that their environment was far from hospital facilities that provided hemodialysis services (Suwanti et al., 2017).

Based on the description above, researchers are interested in researching the Quality of Life of Hemodialysis Patients. This research was designed by applying a descriptive survey to understand the description of each domain aspect of the quality of life of hemodialysis patients. These findings will be used to discuss the impact of hemodialysis therapy in improving the quality of life of hemodialysis patients. Research on the Quality of Life of Hemodialysis Patients may have been carried out before, but this study has never been carried out at the regional level at Sidikalang District Hospital.

## **METHODS**

The research method applied is a descriptive survey. A descriptive survey is a type of research that aims to describe or illustrate certain problems in a community (Suharmanto, 2021). This aim was carried out at the Sidikalang Regional General Hospital, Dairi Regency, North Sumatra in January-April 2024. The research population was 42 hemodialysis patients. Sampling was total sampling by taking an accidental sampling approach. The patient is undergoing hemodialysis and meets the inclusion criteria for effective communication and willingness to be a research respondent.

Primary data is obtained directly from researchers through the WHOQOL-BREF questionnaire, including demographic information like age, gender, education, employment, income, and quality of life for patients undergoing hemodialysis. Secondary data is obtained from hospital medical records, and collected through the distribution of questionnaires prepared by researchers. Both types of data are crucial in understanding the experiences and health of

patients undergoing hemodialysis. The data processing stage in research is data collection, *editing, coding*, describe the data. In this study, data was collected by distributing the WHOQOL-BREF questionnaire. The process begins when the respondent signs informed consent. Data analysis using univariate analysis to describe the quality of life of hemodialysis patients.

## RESULTS

The frequency distribution of each variable studied will be explained which is presented in the following table:

**Table 1. Frequency Distribution of Characteristics of Hemodialysis Patients**

<b>Characteristics</b>	<b>Frequency</b>	<b>Percentage (%)</b>
<b>Gender</b>		
Man	30	71.4
Woman	12	28.6
<b>Age</b>		
Adults (19-59 years)	25	59.5
Elderly (> 60 years)	17	40.6
<b>Income</b>		
Not enough	29	69.1
Enough	13	30.9
<b>Education</b>		
Elementary school	7	16.7
Junior high school	4	9.5
Senior high school	20	47.6
College	11	26.2
<b>Work</b>		
Doesn't work	12	28.6
Workers/Farmers	15	35.7
Self-employed	7	16.7
Civil servants	8	19.0
Total	42	100.0

Based on the Table above, the gender characteristics were 71.4% male, & 28.6% female; Age characteristics were 59.5% adults (19-59 years), & 40.6% elderly (>60 years); income characteristics were found to be less than 69.1%, & sufficient at 30.9%; Educational characteristics were found at 16.67% in elementary school, 9.52% in junior high school, 47.6% in high school, & 26.2% in college; Job characteristics were found to be unemployed as many as 28.58%, farmers as many as 35.7%, entrepreneurs as many as 16.7, & civil servants as many as 19.0%.

**Table 2. Frequency Distribution of Quality of Life for Hemodialysis Patients**

Quality of Life	Frequency	Percentage (%)
Low	4	11.8
Currently	23	67.7
Good	7	20.5
Total	34	100.0

Based on this Table, it can be seen that the quality of life of patients undergoing hemodialysis with the majority having moderate quality of life is 67.7%, good quality of life is 20.5%, and the minority of patients' quality of life is poor at 11.8%. The quality of life in question includes four domains, including the physical health domain with a score ranging from 7-35, the psychological domain from 6-30, the social domain from 3-15, and the environmental domain from 8-40. The scores from each domain are then transformed into a range of 0-100 according to the WHOQOL-BREF (Nursalam, 2020).

**Table 3. Frequency Distribution of Quality of Life for Hemodialysis Patients**

Quality of Life Domain	Bad		Currently		Good	
	f	%	f	%	f	%
Physical Health	25	59.5	17	40.4	0	0
Psychological	31	73.8	9	21.4	2	4.7
Social Relations	16	39.0	6	14.2	20	47.6
Environment	20	47.5	16	38.0	6	14.2
Total	42	100.0	42	100.0	42	100,0

Based on the Table above, the quality of life domain based on the poor physical health domain is 59.5%, while the average is 40.4%. The Psychological domain was poor at 73.8%, moderate at 21.4%, and good at 4.7%. The Social Relations domain was good at 47.6%, bad at 38.0%, moderate at 14.2%, and the Environmental domain was bad at 47.6%, moderate at 38.0%, and good at 14.2%.

## DISCUSSION

The physical health domain has a majority of poor physical health at 59.52%. The results of research conducted by researchers on hemodialysis patients showed that the patient's physical health complaints hampered physical activity. Hemodialysis patients were found to be dizzy, tired, and weak shortly after completing hemodialysis. Patients also experience pain and muscle cramps, skin rashes, difficulty sleeping, and itching, which disturbs the comfort of hemodialysis patients. Physical health has several impacts on the quality of life of chronic kidney failure patients undergoing hemodialysis therapy (Mulia, 2018). The physical health

complaints they experienced greatly affected their daily activities, and patients felt significant changes after being advised by doctors to routinely undergo hemodialysis.

The psychological domain has a bad psychological majority of 73.80%. The results of the research show that patients feel sad because their lives have changed, and they will not be able to return to the way they were before doing this therapy. The possibility of his life only depends on the dialysis machine and the possibility of living longer is slim. Dependence on hemodialysis machines limits their activities and causes their physical and psychosocial health conditions to worsen over time (Sarastika, 2019). Similar to Sarastika's opinion, the quality of life from a psychological perspective usually decreases in patients who have been undergoing hemodialysis for a long time. Patients often feel that their quality of life is deteriorating, feeling like they are a burden to themselves and their families.

The social relations domain has a majority of good social relations of 47.61%. The study by El-Habashi et al. (2020) found that age, gender, marital status, residence, ethnicity, education, employment status, income, and duration of HD did not significantly impact Quality of Life Index scores in these patients. The results conducted on hemodialysis patients showed that the respondents had good social relationships. This opinion is in line with Matondang who concluded that social relationships have a big influence on a person's quality of life, where positive social relationships can improve the quality of life, negative social relationships can worsen it (Matondang, 2017). According to patients, socializing is their way of adapting to the environment, with support from family, friends, neighbors, and friends from various communities such as clan communities, churches, mosques, and regional communities who always provide motivation and encouragement.

The environmental health domain has a bad environment of 47.61%. The results of research on hemodialysis patients show that they feel they are no longer able to do many things where they live. This is believed to be related to the large number of male respondents because, in family dynamics, they often act as heads of the family who are expected to be more involved in the decision-making process (Taufiikurrahman, 2018). Some hemodialysis patients also feel tired because access to the hospital is far/difficult to reach. These patients do not work, so their family's financial condition can be said to be inadequate or just barely.

The majority of hemodialysis patients have a moderate quality of life, namely 40.4%. The results of this research are in line with Asih's research showed that the majority of patients undergoing hemodialysis had an overall quality of life in the moderate category (53.3%) (Asih

et al., 2022). The study by Rosmiati showed that in patients undergoing hemodialysis, the overall quality of life is mostly in the moderate category (70.8%). Individuals who suffer from chronic kidney failure and undergo hemodialysis therapy experience various problems such as depression, financial difficulties, challenges in maintaining employment, fear of death, and so on. This will result in their dissatisfaction with living their daily lives as when they were still fit (Rosmiati, 2018).

The results of the research conducted by the researchers showed that the patient stated that his quality of life was mediocre, and felt resigned to what would happen throughout his life. In the future, they can only pray and hope that in the future they will recover as before. However, to become someone who has a life like before, before the doctor ordered him to undergo routine hemodialysis therapy, is impossible for this patient.

## **CONCLUSION**

The results of research on the quality of life of hemodialysis patients at the Sidikalang Regional General Hospital showed that the quality of life of the majority of hemodialysis patients was moderate, 34 people (80.96%), and the minority was poor, 3 people (7.14%). The results from each of the four domains show that the majority of the Physical Health domain is poor, with 25 people (59.52%). The majority of the psychological domain was poor, with as many as 31 people (73.80%). The majority of the social relations domain was good, with 20 people (47.61%). In the environmental domain, the majority were bad with 20 people (47.61%) and the minority was good with 6 people (14.29%).

## **LIMITATION**

This research can provide an overview of each domain aspect of the quality of life of hemodialysis patients. However, this research is only limited to describing the quality of life of hemodialysis patients only; needs to be discussed in providing health education about maintaining the physical, and psychological health, social relationships, and environment of hemodialysis patients. It is hoped that future researchers will discuss the impact of hemodialysis therapy to improve the quality of life of hemodialysis patients.

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