



JNK

JURNAL NERS DAN KEBIDANAN
(JOURNAL OF NERS AND MIDWIFERY)

<http://jnk.phb.ac.id/index.php/jnk>



Quality of Life of Patients with Chronic Kidney Disease



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Article Information

History Article:

Received, 19/07/2023

Accepted, 28/07/2023

Published, 30/08/2023

Keywords:

hemodialysis, chronic kidney disease, compliance, quality of life

Abstract

Chronic kidney disease results in decreased kidney function in filtering metabolic waste so patients must receive replacement therapy for kidney function, one of which is hemodialysis. Hemodialysis therapy aims to achieve optimal health and a better quality of life. This study aimed to determine the correlation between compliance to hemodialysis therapy and the quality of life of chronic kidney disease patients. The type of the research was a descriptive correlation with a cross-sectional design. The sample was 106 respondents taken by a purposive sampling technique. The statistical test used SPSS statistics 29 with Spearman correlation test. The results showed that there was no significant correlation between compliance with the quality of life of chronic kidney disease patients. The quality of life tends to be good in the majority of hemodialysis patients because there is positive family, social and environmental support so that patients feel that hemodialysis therapy is not a burden. The quality of life is influenced by 4 components, namely physical, psychological, social, and environmental. Compliance is included in one of the physical components where there are several other components and factors that can support the improvement of the quality of life of hemodialysis patients besides compliance.

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DOI: <https://doi.org/10.26699/jnk.v10i2.ART.p189-195>

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P-ISSN : 2355-052X

E-ISSN : 2548-3811

INTRODUCTION

Kidney failure is a medical condition that causes impaired excretion of metabolic waste and can cause fluid-electrolyte and acid-base imbalances in the patient's body (LeMone et al., 2016). Chronic kidney disease has many different causes, but the most frequent etiology are diabetes mellitus (50%) and hypertension (25%). Other causes include glomerulonephritis, cystic kidney disease, and urological disease (Lewis et al., 2014).

The global prevalence of chronic kidney disease is more than 10% of the general population worldwide, with around 843.6 million sufferers (Kovesdy, 2022). The incidence of chronic kidney disease in Indonesia is 0.38% (713,783 people) and 19.33% (2,850 people) undergoing hemodialysis therapy (National Riskesdas, 2018). East Java Province is ranked 9th with a percentage of 0.29% (75,490 people) suffering from chronic kidney disease and 23.14% (224 people) undergoing hemodialysis therapy. Panti Waluya Sawahan Malang Hospital is one of the hospitals in Malang City that has a hemodialysis unit with chronic kidney disease rates from December 2022 to January 2023 of 137 chronic kidney disease patients undergoing hemodialysis therapy.

One of the replacement therapy for kidney function is hemodialysis. The purpose of hemodialysis therapy is not to cure but to replace damaged kidney function so that it can reduce the risk of death and improve the patient's quality of life (Kusniawati, 2018). Hemodialysis therapy is carried out with 2 to 3 times therapy programs in one week and lasts throughout the patient's life. Compliance is an important component in carrying out hemodialysis therapy. Compliance can be influenced by several things, such as level of knowledge and level of education, behavior, age, gender, economy, environment, work, support and encouragement from family and those closest to them (Susantri et al., 2022).

The problem of compliance is one aspect that has a major influence on the contribution of hemodialysis failure (Alisa & Wulandari, 2019). Non-compliance in undergoing hemodialysis therapy has an impact on other aspects, both physical, social and psychological so that it can affect quality of life (Sitanggang et al., 2021). Quality of life can be interpreted as a sense of well-being which includes aspects of happiness, as well as one's life satisfaction (Wahyuni et al., 2018). The possibility of decreasing the quality of life of patients with chronic kidney disease is not only caused by the

condition of the disease but also the treatment and therapy that will be carried out. Therefore routine hemodialysis can cause fatigue, causing non-compliance in carrying out hemodialysis therapy and resulting in a decrease in quality of life.

Based on the results of a preliminary study by researcher at Panti Waluya Sawahan Hospital in Malang, through interview with several hemodialysis patients and obtained data that patients who routinely perform hemodialysis do not feel any complaints after hemodialysis so that they can carry out daily activities without obstacles. Other data shows that even though patients routinely under hemodialysis therapy, sometimes they still experience complaints such as weakness, fatigue, and sleep disturbances which cause patients feel stressed and hopeless. This was particular concern because even though there have been many studies on the correlation between compliance with quality of life, there are still results that high compliance does not affect a person's quality of life so it can have an impact on his life.

Based on the above phenomena, researchers are interested in conducting research related to compliance to hemodialysis therapy and the quality of life of chronic kidney disease patients. This study aims to determine the correlation between compliance with hemodialysis therapy and the quality of life of chronic kidney disease patients at Panti Waluya Sawahan Hospital, Malang.

METHODS

This research was correlational descriptive study with a cross-sectional design. The researcher identified a correlation between compliance to hemodialysis therapy and the quality of life of chronic kidney disease patients. This research was conducted at the Hemodialysis Unit of Panti Waluya Sawahan Hospital Malang on April 5-18 2023. The population consisted of 137 patients. The sample was 106 respondents taken by a purposive sampling technique. The purposive sampling technique is a technique for selecting samples among the population according to the criteria desired by the researcher, so that the selected sample can represent the characteristics of the population (Nursalam, 2017). The inclusion criteria for this study were patients who were willing to become respondents, had signed informed consent, were not involved in similar studies, were at least 18 years old, had composmentis awareness with glasgow coma scale 456, were able to communicate, read and write. The exclusion criteria of this study were patients with

decreased consciousness, unstable TTV, disorientation, patients who were dying, and patients with organic mental disorders. The instruments used in this study were the End Stage Renal Disease Compliance Questionnaire (ESRD-AQ) to measure compliance with hemodialysis therapy and Kidney Disease Quality of Life SF-36 (KDQOL SF-36) to measure the quality of life of patients with chronic kidney disease. The ESRD-AQ and KDQOL SF-36

instruments are questionnaires translated from English into Indonesian. Both instruments in this study were tested for validity with a p-value <0.05 and a Cronbach alpha ESRD-AQ value of 0.762 and Cronbach alpha KDQOL SF-36 0.977 > 0.60 so that it was concluded that all question items were reliable. Univariate analysis was used to describe the demographic data of the respondents. Bivariate analysis used the Spearman correlation test.

RESULTS

The results of this study explain the correlation between compliance with hemodialysis therapy and the quality of life of chronic kidney disease patients at Panti Waluya Sawahan Malang Hospital, supported by the general characteristics of the respondents including age, gender, marital status, last education, occupation, length of time undergoing hemodialysis therapy, coming together, care support, financing status, medical history, and hemodialysis program.

Tabel 1: Frequency Distribution of Respondent Characteristics in the Hemodialysis Unit of Panti Waluya Sawahan Hospital, Malang

	Kategori	n	%
Age	Less than 44	28	26.4
	45 to 59	46	43.4
	60 to 74	28	26.4
	75 to 90	2	1.9
	More than 90	2	1.9
Gender	Male	42	38.6
	Female	64	60.4
Marital Status	Married	95	89.6
	Not Married	5	4.7
	Widow	6	5.7
Last Education	Elementary School	23	21.7
	Junior High School	18	17
	Senior High School	36	34
	College	27	25.5
	No School	2	1.9
Work	Self-employed	5	4.7
	Civil Servant/Police/Soldier	3	2.8
	Did not work	77	72.6
	Other	21	19.8
Long Period of Hemodialysis	Less than 3 Years	67	63.2
	More than 3 Years	39	36.8
Come Together	Family	85	80.2
	Alone	21	19.8
Treatment Support	Cared by Family	104	98.1
	Home Alone	2	1.9
Financing Status	BPJS (Social Security Agency)	106	100
	Independent	0	0
Disease History	Diabetes Mellitus	5	4.7
	Hypertension	94	88.7
	Hypertension & Diabetes Mellitus	7	6.6
Hemodialysis Programs	Twice a Week	70	66
	Three Times a Week	36	34

Table 1 shows that out of 106 respondents, the majority of respondents were in the age range of 45 to 59 years (26.4%), female (60.4%), with the last education Senior High School (34%), respondents did not work (72.6%) and underwent hemodialysis < 3 years (63.2%). As many as 80.2% of respondents came to the

hemodialysis unit accompanied by family/relatives and 98.1% of respondents received treatment support from family/relatives. For all respondents (100%) the financing of hemodialysis therapy was borne by BPJS, respondents with a history of hypertension (88.7%), and the majority of hemodialysis programs 2 times in 1 week (66%).

Tabel 2: Compliance Outcome Category and Quality of Life

	Kategori	n	%
Compliance	Adhered	103	97,2
	Not Adhered	3	2,8
Quality of Life	Poor	0	0
	Moderate	33	31,1
	Good	73	68,9
	Very Good	0	0
	Excellent	0	0

Table 2 shows that 97.2% of respondents adhered to hemodialysis therapy, 68.9% had a good quality of life and 31.1% had a moderate quality of life. There is no data on the poor, very good, and excellent quality of life in patients with chronic kidney disease undergoing hemodialysis therapy.

DISCUSSION

The results of this study showed that 97.2% of respondents obeyed and 2.8% of respondents did not comply. Compliance shows that the respondent always comes for hemodialysis therapy according to the schedule determined by the health worker at the Hemodialysis Unit. Not only that, compliance is also marked by not accelerating the hemodialysis time where the entire course of hemodialysis therapy is carried out according to the rules that apply in the Hemodialysis Unit. For patients with chronic kidney disease undergoing hemodialysis therapy, compliance is the most important aspect of life because the result of non-compliance is to worsen their condition resulting in the accumulation of harmful substances in the body (Unga et al., 2019).

In this study, the number of female respondents (60.4%) was more than the male respondents. The characteristics of a person in making decisions can be influenced by gender. When interviewed, the majority of female respondents answered out loud with positive answers. They said coming to the hospital for hemodialysis therapy was considered like a picnic because they had years of experience in undergoing hemodialysis therapy and the mindset that was instilled in the respondents included positive and adaptive feelings so that they could increase compliance in carrying out hemodialysis. It is different when the researcher conducts interviews with male respondents who tend to give answers that are resigned to the situation. Female respondents also said that individual experience of gender roles and functions related to life expectancy can influence individuals in behaving well for themselves and others (Putri & Afandi, 2022).

The majority of respondents are in the age range of 45-49 years (43.4%). Adults are believed to have good minds and have the right to make choices about their lives. Respondents who underwent hemodialysis therapy where they chose to comply came to under hemodialysis therapy with the reason of prioritizing their health. This is a decision taken because of careful consideration and more life experience where the age factor is very influential. Someone with an adult age tends to be able to maintain and improve compliance to the therapy program given (Idarahyuni et al., 2019).

The education level of the most respondents is Senior High School (34%) and university (25.5%). When individuals are exposed to health information both from health workers and from other people, it will encourage these individuals to take appropriate actions, including complying with hemodialysis therapy. High education can shape a person's mindset to understand the factors related to the disease so that it is expected to increase compliance in undergoing hemodialysis therapy (Putri & Afandi, 2022). Based on interview data, respondents said there was no reason not to come for hemodialysis therapy because the majority of respondents (72.6%) did not work. Respondents know that their condition cannot be forced to carry out all activities without restrictions and feel that their health is more important so they choose not to work. Someone who doesn't work has more time to pay attention to their health so they are more obedient in limiting fluids and coming for hemodialysis therapy compared to those who are still working and have a lot of busyness so they care less about their health (Siagian et al., 2021).

Most of the respondents (63.2%) underwent hemodialysis therapy for less than 3 years. It takes time for a person to identify beliefs related to the disease and the treatment to follow that can help the patient provide an adaptive response. Therefore, the longer a person undergoes hemodialysis therapy, the more adaptive his coping mechanism will be so that it can increase compliance in undergoing hemodialysis therapy. The longer the patient undergoes hemodialysis therapy, the more obedient the patient is because he has reached the acceptance phase and feels the benefits of hemodialysis therapy for his body (Fitriani et al., 2020).

All respondents (100%) the financing for hemodialysis therapy is borne by BPJS. Therefore, respondents said they did not need to worry about financing while undergoing hemodialysis therapy, thus encouraging them to come regularly for hemodialysis therapy. Sources of financing for undergoing hemodialysis therapy can affect the patient's coping mechanism because having health insurance can reduce the financial burden that must be borne by the patient. This is what causes the stressor burden experienced by patients and their families to decrease resulting in an increase or compliance in undergoing hemodialysis therapy (Chayati & Destyanto, 2021).

Most of the respondents (80.2%) came with family/relatives and received treatment support from family/relatives (98.1%). Someone who is or lives in a supportive environment usually has a better condition. There are various problems that arise as a result of the hemodialysis therapy process where these problems can affect compliance in undergoing hemodialysis therapy. Family support is an important factor because family interaction and care make respondents enthusiastic about undergoing hemodialysis therapy, conversely if someone does not get support from the family they will feel like they are a burden on the family thereby increasing stressors and potentially becoming disobedient in undergoing hemodialysis therapy (Inayati et al., 2020). Family support can reduce the negative impact on individual health and with family support there is an increase in the confidence of chronic kidney disease patients in undergoing hemodialysis therapy so that the chances of patients to maintain their health conditions are also higher (Dewi et al., 2022).

Respondents with a good quality of life were 73 people (68.9%) and as many as 33 people (31.1%) had a moderate quality of life. There is no data on respondents with poor, very good, and very good quality of life in chronic kidney disease patients undergoing hemodialysis therapy. Quality of life can be influenced by perceptions where positive self-perceptions can improve quality of life for the better, conversely if negative self-perceptions can reduce or worsen one's quality of life. Quality of life also has a subjective meaning, namely the extent to which a person feels satisfaction or dissatisfaction with important aspects of his life (Puspasari et al., 2018).

The hemodialysis program for the majority of respondents (66%) was carried out twice in 1 week. When meeting other patients who have the same disease, there will be a feeling of wanting to always be together and a positive atmosphere is created, namely being mutually supportive. Support from other people also tends to have a good influence and can convey various feelings that are experienced. Not only that, having the same schedule and meeting the same people will make them closer and able to tell each other stories that they may not necessarily be able to tell their families. Improving the quality of life for the better can come from within adaptive patients with good psychological adaptation. This is one of the uses of adaptation coping mechanisms by patients undergoing hemodialysis therapy by increasing the range of stimuli so that they can respond positively or adaptively (Mait et al., 2021). Social support from patients to fellow patients undergoing hemodialysis therapy will lead to confidence in recovery and can improve the quality of life in a better direction (Damayantie et al., 2022).

Based on the results of the study it was found that there was no significant correlation between compliance with quality of life of chronic kidney disease patients undergoing hemodialysis therapy at the Panti Waluya Sawahan Hospital Malang. According to respondents, hemodialysis therapy has become an important part of life that they have to live without thinking about what will happen in the future so they feel that hemodialysis therapy is not a burden. They believe that hemodialysis therapy will help them get optimal health. This is a positive acceptance of stress on stressors where respondents are at the stage of acceptance of disease and therapy so that there will be an increase in a better quality of life (Mait et al., 2021).

CONCLUSION

Based on the results of the study it can be concluded that there is no significant correlation between compliance with hemodialysis therapy and the quality of life of chronic kidney disease patients in the Hemodialysis Unit of Panti Waluya Sawahan Hospital, Malang. Assessment of the quality of life of patients with chronic kidney disease is not only determined by compliance to hemodialysis therapy, but can also be influenced by several factors, both internal and external factors.

SUGGESTION

Based on this research, it is necessary to know the factors that support and influence compliance to hemodialysis therapy with the quality of life of chronic kidney disease patients.

ACKNOWLEDGEMENT

The author would like to thank the Waluya Sawahan Panti Hospital in Malang and the nurses in the hemodialysis unit who were willing to help the writer during the research process. The author also thanks the respondents who are willing to take the time to participate in the research and answer questions on the questionnaire. The author would like to thank the supervisor who provided direction and motivation during the writing of this article.

CONFLICTS OF INTEREST

In this study, researchers are not involved in any organization or entity that has non-financial or financial interests. However, in this study to avoid conflicts of interest between researchers and research participants, the researchers explained in detail the purpose and process of the research and provided explanation sheets and informed consent sheets to the respondents. Researchers give freedom to respondents to refuse or be willing to be involved in research.

AUTHOR CONTRIBUTIONS

The main author conducted a survey and analysis of the literature related to the phenomenon that occurred. Next, develop theoretical concepts and research conceptual frameworks through the preparation of thesis proposals submitted to the second and third authors. The main author made improvements to the inputs given to make the research method clear. The primary author makes ethical licensing arrangements. After obtaining research ethics permission, the second author and

third author helped arrange correspondence with the hospital agency for research permission.

Research permission has been obtained. The lead author carried out admissions to hospitals and hemodialysis units. After obtaining research permission from the hospital agency, the main researcher conducted research in the hemodialysis unit. Data collection was completed, and the lead author compiled a research report. The second and third authors oversee the research process and help provide input for the perfection of the research report.

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