



Self Efficacy and Quality of Life in Chronic Renal Failure Persons on Hemodialysis

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ABSTRACT

Hemodialysis is performed on patients with end-stage renal failure routinely every 2-3 times a week for the patient's survival. However, many physical, psychological, and socio-economic problems impact patients due to routine hemodialysis. It certainly has an impact on the patient's quality of life. Self-efficacy is believed to affect the patient's quality of life. The purpose of this study was to determine the correlation of self-efficacy with the quality of life of chronic renal failure patients undergoing hemodialysis. This research was conducted in the Hemodialysis Room at Raden Mattaher Hospital with a total sample of 62 people. The side technique uses consecutive sampling. The measuring instrument used is SEMCD-6 which assesses self-efficacy and WHOQoL-Bref to assess the patient's quality of life. Data analysis using Spearman correlation. The results of the univariate analysis showed the mean self-efficacy score was (42.47 ± 5.11) . The highest mean score was found in the environmental domain (63.77 ± 10.85) , and the lowest average was in the physical domain (51.98 ± 7.71) . The bivariate analysis found that there was a positive correlation between self-efficacy and quality of life in the four domains (physical, psychological, social relations, and environmental domains) with a p -value < 0.05 ($R = 0.366-0.631$). It shows that the better the self-efficacy, the higher the patient's quality of life. It is hoped that nurses can provide motivation and health education to patients and families to increase patient self-efficacy so that the patient's quality of life increases.

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Kata kunci:

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ABSTRAK

Hemodialisis dilakukan pada pasien gagal ginjal kronik tahap akhir secara rutin yang dilakukan setiap 2-3 kali dalam seminggu untuk kelangsungan hidup pasien. Namun demikian, sejumlah dampak baik fisik, psikologis, maupun sosial ekonomi dapat timbul pada pasien akibat rutinitas dalam menjalani hemodialisis. Hal ini tentu berdampak pada kualitas hidup pasien. *Self efficacy* diyakini mempengaruhi kualitas hidup pasien. Tujuan penelitian ini untuk mengetahui korelasi *self efficacy* dengan kualitas hidup pasien gagal ginjal kronik yang menjalani hemodialisa. Penelitian ini dilakukan di ruang hemodialisa RSUD Raden Mattaher dengan jumlah sampel sebanyak 62 orang. Teknik *sampling* menggunakan *consecutive sampling*. Alat ukur yang digunakan yaitu SEMCD-6 yang digunakan untuk menilai *self efficacy* dan WHOQoL-Bref untuk menilai kualitas hidup pasien. Analisa data menggunakan korelasi *Spearman*. Hasil analisis univariat menunjukkan rerata skor *self efficacy* $(42,47 \pm 5,11)$. Skor rerata tertinggi didapatkan pada domain lingkungan $(63,77 \pm 10,85)$ dan skor rerata terendah berada pada domain fisik $(51,98 \pm 7,71)$. Analisis bivariat ditemukan hasil terdapat korelasi positif *self efficacy* dengan kualitas hidup pada keempat domain (domain fisik, psikologis, hubungan sosial, dan lingkungan) dengan nilai p -value $< 0,05$ ($R = 0,366-0,631$). Hal ini

menunjukkan semakin baik *self efficacy*, semakin tinggi kualitas hidup pasien. Diharapkan perawat dapat memberikan motivasi dan edukasi kesehatan kepada pasien dan keluarga untuk dapat meningkatkan *self efficacy* pasien sehingga kualitas hidup pasien meningkat.

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INTRODUCTION

Chronic renal failure is a type of non-com; unicable disease that is a problem globally. According to Global Burden Disease Chronic Kidney Disease data in 2016, chronic kidney disease is the 12th leading cause of death globally and the third leading cause of death in 2015 (Kementerian Kesehatan RI, 2018). Globally, one to two million people died due to chronic kidney disease in 2017. In Indonesia, the prevalence of chronic kidney disease reached 3.8% in 2018 (Ministry of Health, 2018), increasing 1.8 per cent from 2013.

Chronic renal failure is a progressive and irreversible disease and has a high risk of complications and causes death. Many physical symptoms appear along with decreased kidney function, such as feeling weak, nauseated, dry and itchy skin, cramps, swelling of the legs, and hypertension. If chronic renal failure is not treated correctly, it will fall into the condition of end stage renal disease. In this condition, the kidneys have lost their ability so renal replacement therapy is needed, such as kidney transplantation or hemodialysis (National Kidney Foundation, 2002).

Hemodialysis is a therapy to get rid of metabolic waste, remove fluids, and help control blood pressure and maintain fluid balance (National Kidney Foundation, 2015). Hemodialysis is known to prolong the patient's life. Patients with end stage renal failure must undergo hemodialysis 2-3 times, which lasts approximately four hours. So, this will impact the daily activities or lifestyle that the patient usually does, where the patient should be restricted to diet and fluids (Anees et al., 2011; Avramovic & Stefanovic, 2012; Lewis et al., 2010). However, hemodialysis can prolong the patient's life, the patients experience several physical and psychological, social, economic and environmental problems, such as decreased appetite, anemia, impaired sexual function, financial problems, dependence on caregivers, anxiety, hopelessness, etc. They can affect the patient's quality of life (Gerasimoula et al., 2015; Kaufman, 2001; Lew & Piraino, 2008; Moshtagh et al., 2013; Royani et al., 2013; Unruh & Hess, 2007).

Quality of life in hemodialysis patients is an essential predictor in assessing the effectiveness of the therapy, the patient's survival rate and hospitalization. Studies show that patients with chronic renal failure who undergo hemodialysis have a lower quality of life (Gudex, 1995). One of the patients' qualities of life can be influenced by self-efficacy (Kreitler et al., 2007; Weng et al., 2010). Good self-efficacy is related to the patient's health status and can reduce hospitalization and improve the quality of life in hemodialysis patients (Curtin et al., 2008; Mousa et al., 2018). Self-efficacy is a form of self-confidence in carrying out specific actions and is believed to affect one's health behaviour, increase motivation, and improve emotional status in patients (Akin, 2009; Ammentorp et al., 2007; Bandura, 1997). Patients with low self-efficacy tend to be disobedient to treatment, so it will have an impact on the patient's quality of life (Kutner, 2001). Chronic renal failure patients undergoing hemodialysis must also understand the

function and concept of self efficacy. Thus, patients can have good self-efficacy to manage their disease (Sorat, 2018).

The study conducted by Purba et al. (2018) at Bandung Adventist Hospital showed that patients with chronic renal failure who underwent hemodialysis had a high self efficacy of 54.7%. However, studies on the relationship between self-efficacy and quality of life in chronic renal failure patients undergoing hemodialysis, especially in Jambi, are still limited. This study aims to assess self efficacy and quality of life chronic renal failure persons on hemodialysis in Raden MattaHer Hospital Jambi Province.

METHOD

Research Design

This study was correlational research design. It was used to know the correlation between self efficacy and quality of life. The research was conducted at the Hemodialysis Unit of RSUD Raden MattaHer in June 2019 and has received ethical approval from the Ethics Committee of RSUD Raden MattaHer.

Sampling

The population in this study were all patients with chronic renal failure who underwent hemodialysis with a total sample of 62 people. The sampling technique used consecutive sampling. The inclusion criteria in this study were patients with chronic renal failure who underwent hemodialysis > 3 months. In contrast, the exclusion criteria were patients who were unable to complete filling out the questionnaire, patients with unstable health conditions such as complaining of pain, dizziness, decreased consciousness, and patients who had difficulty/were unable to speak.

Measures

The collecting data using a *self-efficacy questionnaire for Managing Chronic Disease 6-Item Scale* with a score range of 6-60 (Ritter & Lorig, 2014). This questionnaire was translated into Indonesian by the Jambi University Language Institute. The results of the validity of the questionnaire are in the range of 0.67-0.96, and the Cronbach alpha value is 0.957. Meanwhile, quality of life was measured using a questionnaire from WHO (2004) in abbreviated form or WHOQOL-Bref, translated into Indonesian with a score range of 0-100. The higher the score, the better the respondent's quality of life. The validity test results show that the questionnaire is valid and reliable, with a Cronbach alpha value of 0.892.

Data analysis

Data were analyzed using descriptive statistics to assess the description of self efficacy and quality of life. Meanwhile,

to determine the correlation between self-efficacy and quality of life used Spearman's because the data are not normally distributed.

RESULT AND DISCUSSION

Table 1
Frequency Distribution of Respondents (n=62)

Characteristics	Frequency	Percentage
Age		
18-45	12	19.0
45-65	40	65.0
>65	10	16.0
Gender		
Man	28	45.2
Woman	34	54.8
Level of education		
No school	1	1.6
Elementary	22	35.5
Junior high school	11	17.7
Senior high school	10	16.2
College	18	29.0
Marital status		
Marry	53	85.5
Not married	9	14.5
Illness History		
Diabetes mellitus	11	17.7
Hypertension	40	64.5
Glomerulonephritis	1	1.6
Etc	10	16.1

Based on Table 1, The majority of age respondents are in the range 45-65 years old. More than half of the respondents are female (54.8%). Most respondents' education level is an elementary school (35.5%). The majority of respondents are married (85.5%), and most of the respondents have a history of hypertension (64.5%).

Age is a risk factor for chronic renal failure. In this study, most respondents were aged between 45-65 years by 65%. With age, renal function declines. The results of this study are in line with the research conducted by Izzah et al. (2021), where patients with chronic renal failure are in the age range of 41-60 years.

Most respondents were women, with a percentage of 54.8%. This study is in line with the survey conducted by Suleymanlar et al. (2011), where the rate of women with chronic renal failure reached 55.7%.

Based on the education level of the respondents, the most respondents with an elementary education level of 35.5%. Studies conducted by Dunkler et al. (2015) showed a relationship between education and chronic renal failure. Respondents with a high level of education have a lower risk of chronic renal failure than respondents with a low level of

education. Based on Green's theory (1980), education is known as a predisposing factor that affects a person's health behaviour, including health maintenance, disease prevention, seeking treatment, recovering health, and determining therapy or treatment actions (Notoatmodjo, 2014)

Most respondents in this study were in marital status (85.5%). The results of this study were in line with research conducted by Kusniawati (2018), where respondents with marital status are married more than those who are not married. Respondents who are married tend to get motivation and support from their partners, children, and families in dealing with their illness.

Hypertension is the most common disease history owned by respondents in this study with a total (64.5%). Hypertension can cause pressure on the glomerular capillaries, leading to glomerulosclerosis. This condition can lead to chronic hypoxia, leading to kidney damage (Palm & Nordquist, 2011). The results of this study are in line with Pranandari & Supadmi (2015), where most patients with chronic renal failure have a history of hypertension, 55.55%.

Table 2
Self Efficacy of Chronic Renal Failure Patients Undergoing Hemodialysis (n=62)

Variable	Mean±SD	Min-Max
Self Efficacy	42.47±5.11	22-50

Based on Table 2, it can be seen that the average *self-efficacy score is 42.47 (SD±5.11)*. The patient's lowest score was 22 and the highest was 50.

The average self-efficacy score in patients with chronic renal failure undergoing hemodialysis was 42.47 (SD ±5.114). It shows that most of the respondents have high self efficacy. Respondents with high self-efficacy believe they can control fatigue, pain, and negative emotions to carry out daily activities. In addition, patients also have confidence in managing their health, such as adjusting diet and fluids and believe that their lives are not solely dependent on drugs or hemodialysis therapy that must be carried out. Meanwhile, respondents with low self-efficacy can be caused by not having self-confidence in managing physical symptoms that arise from their illness and negative emotions in themselves and find it difficult to carry out daily activities because their lives must depend on hemodialysis (Sathvik et al., 2008).

Self efficacy in hemodialysis patients is essential. Patients can apply self-care management such as diet and fluid management with good self-efficacy. It is known that diet and fluid management is important aspect for hemodialysis patients (Kusuma & Kusumastuti, 2017). The study conducted by Mousa et al. (2018) showed many factors related to self-efficacy in chronic renal failure patients undergoing hemodialysis, including age, education level, comorbidities, and the number of drugs that must be consumed.

Table 3
Quality of Life of Chronic Renal Failure Patients Undergoing Hemodialysis (n=62)

Domain	Minimum	Maximum	Average	Standard Deviation
Physique	31	69	51.98	7.71
psychology	25	75	55.56	11.8
Social Relations	31	75	63.38	11.97
Environment	44	81	63.77	10.85

Based on table 3. the highest mean quality of life of patients with chronic renal failure undergoing hemodialysis is in the environmental domain (63.77±10.85). Meanwhile, the lowest quality of life domain was in the physical domain (51.98±7.71).

Physical domain indicators include the patient's daily activities, dependence on drugs and medical assistance, energy and fatigue, and the ability to carry out daily activities (WHO, 2004). Low physical domain scores indicate that the patient feels alive dependent on hemodialysis and drugs to survive. In addition, the patient feels that his daily activities are disturbed, and he quickly feels tired due to his disease condition and the routine treatment he has to undergo. In addition, patients also find it difficult to sleep or experience insomnia. The results of this study are in line with the research conducted by Sathvik et al. (2008), where the lowest mean score was in the physical domain in patients with chronic renal failure undergoing hemodialysis (51.98±7.71).

The average score obtained in the psychological domain (55.56±11.8). Patients with a low mean score in the psychological domain indicate that patients often have negative feelings such as feeling anxious and depressed with their condition.(Sathvik et al., 2008). Hemodialysis patients experience some mental problems where the patient must routinely perform hemodialysis. It can cause the patient to feel bored. Meanwhile, patients with high psychological domain scores have a pretty good self-image and can manage negative emotions that arise because of their illness.

The results showed that the mean score of the social relationship domain was (63.38±11.97), which was at the moderate level. Hemodialysis patients with good social relationship scores indicate that patients are satisfied with getting support from their family and closest people in dealing with their illness. The results of this study are in line with the research conducted by Alshraifeen et al. (2020) where hemodialysis patients have a pretty good score in the social relationship domain.

The environmental domain has a vital role in the patient's health status. The environmental domain includes economic resources, work environment, access to health services, security, and opportunities for recreation (WHO, 2004). The results of this study are in line with the research conducted by Sathvik et al. (2008) where the environmental domain has the highest mean score compared to the other three domains (63.77±10.85). A high environmental domain score indicates that patients are quite satisfied with their environment, such as their access to health services. Patients can still do recreation or things they like (Sathvik et al., 2008). Patients also feel that they can easily access health services and get good sources of information related to their illness.

Table 4
Self Efficacy and Quality of Life of Chronic Renal Failure Patients Undergoing Hemodialysis (n=62)

Quality of Life	Self Efficacy	
	R	p-value
Physical Domain	0.631	0.001
Psychological Domain	0.604	0.033
Social Relations Domain	0.309	0.015
Environmental Domain	0.366	0.026

Based on table 4the results showed that there was a correlation of self-efficacy with the physical domain (p - value = 0.001, $R=0.631$) psychological domain (p value =

0.033 , $R = 0.604$), social relations domain (p -value = 0.015, $R = 0.309$) and the environmental domain (p -value = 0.026, $R = 0.366$).

This study showed that self-efficacy positively correlates with the four domains of quality of life of patients with chronic renal failure undergoing hemodialysis. It shows that the higher the self-efficacy, the better the patient's quality of life in the physical, psychological, social relationships, and environmental domains. Patients with high self-efficacy can carry out daily activities and do not depend on hemodialysis and drug therapy. With high self efficacy, patients can also minimize negative feelings such as anxiety, depression, and hopelessness about their condition. Patients also feel that their lives are still meaningful and have self-esteem who is doing well despite having to undergo hemodialysis for the rest of his life. On the other hand, low self efficacy in patients with chronic renal failure undergoing hemodialysis will cause changes in self-image and a decrease in self-esteem.

Based on the results of the study, it was also found that the better the patient's self efficacy, the more satisfied patients tend to have good personal and social relationships with family and friends. Meanwhile, based on the environmental domain, patients with high self-efficacy tend to be satisfied with the health services they get, access to information transportation, and have time for fun/recreation.

This study was in line with Tsay & Healstead (2002) research and Mousa et al. (2018), which shows that hemodialysis patients with high self-efficacy have a better quality of life. The results of this study were also in line with the research of Welly & Rahmi (2021), which showed a significant relationship between self-efficacy and the quality of life of chronic renal failure patients undergoing hemodialysis (p -value = 0.000).

Hemodialysis patients with high self-efficacy can perform physical and psychosocial activities better than patients with low self-efficacy. Self-efficacy will increase adherence to the treatment being undertaken and reduce the number of negative physical and psychological symptoms. Self efficacy will give a sense of self-confidence. A person who has good self-confidence will carry out positive activities for his health so that the patient's quality of life can improve(Cummings et al., 1982; Tsay & Healstead, 2002). Conversely, if the patient has low self-efficacy, it can reduce health behaviour, causing a decrease in quality of life. This shows that self-efficacy is a predictor of one's self-care adherence, which will impact the patient's quality of life.

Self efficacy in hemodialysis patients can be increased through various appropriate interventions. Interventions provided by nurses include providing motivation and health education to patients about their illness and how to treat it(Royani et al., 2013).

LIMITATION OF THE STUDY

This study has limitation in that the number of sample was small (n=62). This research was not also control cofounding factors.

CONCLUSIONS AND SUGGESTIONS

Based on the study results, it can be concluded that there is a correlation between self-efficacy and quality of life in the four domains in chronic renal failure patients undergoing hemodialysis at Raden Mattaher Hospital (p -value <0.05). It is hoped that nurses can provide several interventions that

can increase patient self-efficacy, including through health education related to disease and how to treat it to patients and families and provide motivation. With high self efficacy, it is hoped that the patient's quality of life can increase.

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Conflict of Interest Statement

The author declares that there is no potential conflict of interest.

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