



## The Relationship Self-Efficacy and Treatment Compliance in Chronic Kidney Failure Patients at Hospital

Pinondang Hotria Siregar<sup>1\*</sup>, Melva Epy Mardiana Manurung<sup>2</sup>, Dewi Hutagaol<sup>3</sup>

<sup>1,2,3</sup>Arjuna Laguboti School Of Health Sciences, Indonesia

<sup>1\*</sup>[pinria85@gmail.com](mailto:pinria85@gmail.com), <sup>2</sup>[manurungmelva@gmail.com](mailto:manurungmelva@gmail.com), <sup>3</sup>[dewihutagaol@gmail.com](mailto:dewihutagaol@gmail.com)



### \*Corresponding Author

#### Article History:

Submitted: 26-01-2026

Accepted: 04-02-2026

Published: 15-02-2026

#### Keywords:

Self-efficacy; Adherence;

Chronic Kidney Disease.

The Journal is licensed under a Creative Commons Attribution-NonCommercial 4.0 International (CC BY-NC 4.0).

### ABSTRACT

Chronic Kidney Disease (CKD) is a disease that occurs due to complete or partial kidney damage. The impact of this kidney failure is the inability to filter kidneys, so treatment methods include hemodialysis and fluid restriction. Objective: This study aimed to determine the relationship between self-efficacy and medication adherence in patients with chronic kidney disease (CKD). This study used a quantitative descriptive cross-sectional study design. The sampling technique used a total sampling of 33 respondents using Spearman's analysis. Results: The self-efficacy of CKD patients at Djasamen Saragih Regional Hospital with HD durations of <1 year was shown to be moderate, 21.2% (7) had high self-efficacy, and 12.1% (4) had low self-efficacy. The majority of CKD patients undergoing HD durations of <1 year (97%) were compliant with medication, while 3% (1) were non-compliant. The 2-tailed significance value (Significant) is  $0.853 > 0.05$ , thus it can be concluded that there is no relationship between self-efficacy and treatment adherence in chronic kidney disease (CKD) patients at Djasamen Saragih Regional General Hospital, Pematang Siantar. Healthcare workers are expected to continue providing counseling to improve the self-efficacy of chronic kidney disease (CKD) patients and to encourage families to continue providing support, motivation, and communication to patients undergoing hemodialysis.

### INTRODUCTION

Chronic Kidney Disease (CKD) or chronic renal failure damages the kidneys gradually, permanently and irreversibly. This condition develops when the kidneys are unable to control fluids, electrolytes and metabolism. This failure causes uraemia, the accumulation of urea and other nitrogenous waste products in the blood. CKD destroys the kidneys over time and requires dialysis or haemodialysis and kidney transplantation (Malini et al., 2023). According to *the World Health Organisation* (WHO), CKD affects more than 10% of the world's population. Data from *the International Kidney Federation* shows that in 2021, the prevalence of chronic kidney failure worldwide reached more than 10% of the world's population, or around 800 million cases. The prevalence of CKD in Indonesia is estimated to increase, with data showing an increase from 2% in 2023 to 3.8% in 2024. A total of 134,057 patients underwent haemodialysis in 2024, resulting in treatment costs reaching £7.5 billion (Ministry of Health, 2024). In the United States, chronic kidney disease ranked 8th in 2019 with a total of 254,028 deaths across the country, and the mortality rate for chronic kidney disease was higher than It is more common in men than women, with 131,008 deaths in men and 123,020 deaths in women (PAHO, 2021).

Of the 500 million people suffering from CKD, around 1.5 million have to live with haemodialysis. The number of patients undergoing haemodialysis or dialysis in Indonesia continues to increase. Based on 2024 BPJS Health data, there are 134,057 patients undergoing this procedure, not including patients who are not registered with BPJS. CKD is often undetected until kidney function has declined by more than 90 per cent (PERNEFRI, 2024). The large number of CKD sufferers poses a challenge to patients and their families in undergoing treatment. Patients must be able to adopt behaviours to achieve the desired results in line with their capabilities, known as self-efficacy. According to Parvan in Welly & Rahmi (2021), patients with chronic kidney failure typically face various issues such as financial difficulties, challenges in working, reduced sexual desire, depression, fear of death, and lifestyle changes. These factors can significantly impact one's quality of life and even lead to psychological issues in patients. Therefore, patients with chronic kidney failure require a high level of self-efficacy. If patients experience setbacks, their self-efficacy will determine the actions they choose, the amount of effort they put into the activity, how long they persevere in the face of challenges and failures, and their resilience throughout the process (Fitri Mailani, 2022).

Increased self-efficacy in patients with kidney failure will also improve the quality of life of haemodialysis patients. Patients can be encouraged to be consistent and compliant in following all stages of therapy if they have a high level of self-efficacy. This can assist in the process of addressing health issues that arise at various levels, including physiological, psychological, social, and environmental. Conversely, low self-efficacy can lead to a decline in the patient's quality of life. This is because patients doubt their recovery. They are constantly tormented by their condition and cannot accept their life. Even if they are physically capable, patients may choose not to attend social events





(Rohmaniah & Sunarno, 2022). Self-efficacy influences the actions that will be chosen, how much effort will be put into these activities, how long one will persevere in the face of obstacles and failures, and resilience in the event of setbacks (Fitri Mailani, 2022).

Based on a preliminary study conducted at the Haemodialysis Unit of Djasamen Saragih Regional General Hospital on three patients who had undergone haemodialysis for less than six months, one patient said that they could not accept their current condition and felt angry. One patient said they had accepted their condition and were trying to be resigned to their illness, realising that their current illness was due to their behaviour of drinking alcohol and staying up late, while the other patient said they still felt sad, afraid to live their life, and disappointed because they could no longer do the activities they used to do. Based on the above background description, the researcher aims to investigate the relationship between *Self-Efficacy* and treatment adherence among CKD patients at Djasamen Saragih General Hospital in Pematang Siantar.

### LITERATURE REVIEW

*Self-efficacy* is an individual's belief in their ability to perform activities well (Romadhon, 2022). According to Sasongko et al. (2020) in (Mallisa et al., 2022), *self-efficacy* is an individual's assessment of their abilities in relation to the results achieved. Self-efficacy encompasses aspects of self-knowledge that influence one's life (Febriyansi et al., 2020). Self-efficacy has the potential to make individuals believe in their ability to overcome problems and obstacles that prevent them from achieving their goals (Sinuraya et al., 2022).

Chronic Kidney Disease (GKD) is a global health problem with increasing cases due to the growing elderly population and the occurrence of various comorbidities such as diabetes mellitus and hypertension. Chronic kidney disease is a progressive change in both the structure and function of the kidneys caused by several factors (Kalantar-Zadeh et al., 2021).

The next step after a diagnosis of chronic kidney disease is established is to determine the stage based on the Glomerular Filtration Rate (GFR), which incorporates albuminuria as an indicator of disease severity.

Table 1. Classification And Description Based On GFR

Stage	GFR	Description
<b>Stage 1</b>	90 mL/minute/1.73 m <sup>2</sup>	Kidney damage occurs with GFR normal, or increased, asymptomatic, normal creatinine
<b>Stage 2</b>	60–89 mL/minute/1.73 m <sup>2</sup>	decrease GFR mild, asymptomatic, possible hypertension occurs
<b>Stage 3</b>	30–59 mL/minute/1.73 m <sup>2</sup>	Decrease GFR moderate, hypertension has occurred, possible anaemia and malnutrition, mild increase in BUN and serum creatinine levels
<b>Stage 4</b>	15–29 mL/min/1.73 m <sup>2</sup>	Severe GFR decline, hypertension, anaemia, malnutrition, bone metabolism changes, oedema, metabolic acidosis, hypercalcaemia, possible uraemia, azotaemia with increased BUN and serum creatinine levels
<b>Stage 4</b>	<15 mL/minute/1.73 m <sup>2</sup>	End-stage with azotemia and uremia clearly present. Dialysis or kidney transplantation is necessary

Compliance comes from the English word "obedience". "Obedience" comes from the Latin word "obedire", which means to listen to. The meaning of obedience is to comply. Thus, compliance can be interpreted as obeying orders or rules (Alam, 2021). Compliance is the extent to which a person carries out a recommended rule. The extent to which an individual carries out the care, treatment, and behaviour recommended by nurses, doctors, or other health workers. Compliance describes the extent to which an individual behaves in accordance with the rules recommended by health workers (Pratama, 2021).

The factors that influence compliance are knowledge obtained from counselling or health education, which tends to bring about changes in health behaviour among groups with higher education levels than those with lower education levels, so that this knowledge can influence a person's decision-making and determine their state of mind in undergoing regular haemodialysis therapy according to schedule (Agustani et al., 2022). Patients of productive age are more compliant in undergoing haemodialysis therapy than patients of non-productive age (Agustani et al., 2022). Decision-making is influenced by gender, where daily experiences according to the tasks, functions, and roles of each gender play a role in influencing a person to behave well towards themselves and others (Putri & Afandi, 2022). There is a difference in frequency between men and women, with women being more compliant with various treatments or health improvement programmes than men because women tend to have a positive attitude towards accepting and undergoing treatment to achieve optimal health (Agustani et al., 2022).

Haemodialysis therapy and medical treatment are renal replacement therapies that are carried out continuously, so patients need high compliance to achieve optimal health (Putri & Afandi, 2022). Haemodialysis and medication are not done only once, but are carried out routinely over a long period of time. Several factors influence the compliance of chronic kidney failure patients in fluid restriction, namely, level of knowledge, education, involvement of health





workers and family, and individual self-concept. If a person has good knowledge, they tend to be able to control themselves to limit fluids as recommended by health workers (Daryani et al., 2021). Fluid restriction is important for patients with chronic kidney disease because chronic fluid overload, cardiovascular risks, and hypertension can occur if fluid restriction is not adhered to (Rustiawati et al., 2020).

**METHOD**

The research design used in this study was a *cross-sectional study*, where all variables were collected at the same time. Data collection was conducted simultaneously at one time between risk factors and severity, meaning all variables with the independent variable of *Self-Efficacy* and the variable of treatment compliance in CKD patients. This study was conducted to determine the relationship between *Self-Efficacy* and treatment compliance in CKD patients at Djasamen Saragih General Hospital in Pematang Siantar.

The population used in this study was all CKD patients at Djasamen Saragih Pematang Siantar Regional General Hospital. The population used in this study was all CKD patients undergoing haemodialysis at Djasamen Saragih Pematang Siantar Regional General Hospital. Based on a preliminary study, there were a total of 128 HD patients.

A sample is a part of the population selected with a specific sample to represent the entire research object (Nursalam, 2022). The sample used in this study was chronic kidney failure patients at Djasamen Saragih Pematang Siantar Regional General Hospital who underwent HD for less than 12 months, and according to data from medical records, there were 33 people.

The sampling method for this study was *total sampling*. Total sampling is a sampling technique where the number of samples is equal to the population. Total sampling was chosen because the population was less than 100 (Sugiyono, 2022).

The data collected in this study was primary data obtained by distributing questionnaires to hypertensive patients who were willing to be respondents. The researcher divided the research process into several stages to facilitate the research process.

Research instruments are measuring tools used to obtain data in a study. Research instruments generally have two criteria, namely validity and reliability, using questionnaires.

The data analysis in this study is as follows: (1) Univariate analysis, a data processing procedure that describes and summarises data scientifically in the form of tables or graphs (2) Bivariate analysis is an analysis conducted on two variables that are suspected to be related or correlated. The analysis will be conducted using *SPSS 21.0 for Windows* with Spearman's correlation coefficient because the research variables use an ordinal scale.

**RESULT**

**Characteristics Of Ckd Patients At Djasamen Saragih Regional General Hospital With Hd < 1 Year**

In this study, a questionnaire was distributed to CKD patients undergoing treatment in the HD Room at Djasamen Saragih Regional General Hospital. The characteristics of the respondents are as follows:

Table 2. Characteristics Of Respondents With Chronic Kidney Disease At Djasamen Saragih General Hospital With HD < 1 Year (N: 33 People)

No	Characteristics	Number	%
1	<b>Gender</b>		
	Male	17	51.5
	Female	16	48.5
	Total	33	100
2	<b>Age</b>		
	26-35 Years	5	15.2
	36-45 Years	7	21.2
	46-55 Years	11	33.3
	56-65 Years	10	30.3
	Total	33	100.0
3	<b>Duration Of Haemodialysis</b>		
	0-6 months	6	18.2
	>6-12 months	27	81.8
	Total	33	100.0
4	<b>PeEducation</b>		
	Primary	4	12.1
	Junior High School	7	21.2
	High School	16	48.5
	D3	4	12.1
	S1Bachelor	2	6.1
	Total	33	100.0





5	<b>Occupation</b>		
	Civil Servant/police/Military	1	3.0
	PePrivate Sector Employee	2	6.1
	Lecture/Teacher	5	15.2
	Labourer/Farmer	12	36.4
	Self - Employed	9	27.3
	Other	3	9.1
	Not Working	1	3.0
	Total	33	100.0

Based on Table 2 above, it was found that the characteristics of CKD patients at Djasamen Saragih Regional General Hospital who had undergone HD for less than 1 year were predominantly male at 51.5% (17 people) and female at 48.5% (16 people). Based on age, the majority were aged 46-55 years (33.3%, 11 individuals) and 56-65 years (30.3%, 10 individuals), based on HD duration, the majority were 6-12 months, 81.8% (26 people), based on education, the majority were high school graduates, 48.5% (16 people), and based on occupation, the majority were labourers/farmers, 36.4% (12 people).

### Self-Efficacy Of Ckd Patients At Djasamen Saragih General Hospital With Hd < 1 Year

Based on the results of research conducted at Djasamen Saragih General Hospital in Pematang Siantar in the HD unit, the *self-efficacy* of CKD patients at Djasamen Saragih General Hospital with HD < 1 year was found as follows:

Table 3. Self-Efficacy of CKD Patients at Djasamen Saragih Regional General Hospital with HD < 1 year (n: 33 people)

Self-efficacy	Number	%
<b>Low self-efficacy</b>	4	<b>12.1</b>
<b>Moderate self-efficacy</b>	22	<b>66.7</b>
<b>High self-efficacy</b>	7	<b>21.2</b>
<b>Total</b>	<b>33</b>	<b>100</b>

Based on Table 3 above, the self-efficacy of CKD patients at Djasamen Saragih Regional General Hospital with HD < 1 year, 66.7% (22 people) had moderate *self-efficacy*, 21.2% (7 people) had high *self-efficacy*, and 12.1% (4 people) had low *self-efficacy*.

### Compliance

Based on the results of the study conducted at Djasamen Saragih General Hospital in Pematang Siantar in the HD unit for CKD patients at Djasamen Saragih General Hospital with HD < 1 year, the following was found:

Table 4. Compliance of CKD patients at Djasamen Saragih General Hospital with HD < 1 year (n: 33 people)

Compliance	Number	%
Non-compliant	1	3.0
compliant	32	97.0
Total	33	100.0

Based on Table 4 above, the majority of CKD patients undergoing HD for less than 1 year, 97% (32 people), were compliant with treatment, while 3% (1 person) were non-compliant.

### The Relationship Between Self-Efficacy And Treatment Adherence Among Ckd Patients At Djasamen Saragih General Hospital, Pematang Siantar

Based on the study conducted at Djasamen Saragih General Hospital HD unit using the Spearman test, the following results were obtained:

Table 5. Relationship Between Treatment Adherence and Quality of Life in CKD Patients Undergoing Haemodialysis at Djasamen Saragih General Hospital

	Spearman	Adherence Quality of	
<b>Self-efficacy</b>	Correlation Coefficient	1.000	.033
	Sig. (two-tailed)	.	.853
	N	33	33
<b>Compliance</b>	Correlation Coefficient	.033	1.000
	Sig. (two-tailed)	.853	.





Based on Table 5 above, the results of the statistical test using the Spearman test show that  $N$  is 33. The Sig. (2-tailed) value is  $0.853 > 0.05$ , so it can be concluded that there is no relationship between *Self-Efficacy* and Treatment Adherence among CKD Patients at Djasamen Saragih General Hospital in Pematang Siantar.

## DISCUSSION

### Characteristics Of Ckd Patients At Djasamen Saragih Regional General Hospital With Hd < 1 Year

Based on the results of the study, it was found that the characteristics of CKD patients at Djasamen Saragih Regional General Hospital who underwent HD for less than 1 year were predominantly male at 51.5% (17 people) and female at 48.5% (16 people) based on gender. based on age, the majority were aged 46-55 years (33.3% or 11 people) and 56-65 years (30.3% or 10 people), Based on the duration of HD, the majority were 6-12 months, 81.8% (26 people), Based on education, the majority were high school graduates, 48.5% (16 people), and based on occupation, the majority were labourers/farmers, 36.4% (12 people).

Age and gender also influence the quality of life of haemodialysis patients. Several studies report that female patients tend to have lower quality of life scores than males, which may be due to differences in perceptions of the disease and the social support received (Riehl-Tonn et al., 2024). In addition, other studies mention that psychological factors, such as anxiety and depression levels, are higher in female patients undergoing haemodialysis therapy than in males (Ali & Syed, 2023; Danial et al., 2024; Li et al., 2023).

Age is one of the factors that cannot be changed in CKD. From the research data obtained, CKD patients at Djasamen Saragih General Hospital showed that the majority of patients undergoing HD for less than 1 year were aged 46-55 years (33.3% or 11 people) and 56-65 years (30.3% or 10 people). This is because the older a person gets, the greater the likelihood of developing CKD. The results of this study are in line with the research by Amalya Salsabila, et al., (2023), which found that the highest percentage of CKD cases was in the late elderly group (56-65 years old), with 39 patients out of 90 patients (43.3%), followed by the late adult group (27.78%), early elderly (21.11%), and early adult group (8.89%). From the results of the study, it was found that there were more male CKD patients than female patients, with 51.5% (17 people) being male and 48.5% (16 people) being female. The results of this study are in line with the research by Amalya Salsabila, et al., (2023).

Rohmaniah et al. (2022) stated that with a high level of knowledge, respondents would seek information about their illness to reduce or even eliminate anxiety and help respondents find information on how to cope with living with kidney failure. Finding ways for respondents to increase their *self- efficacy* can increase their sense of control in overcoming self-management barriers, such as the need for information about chronic kidney failure and the confidence to communicate actively.

Therefore, the researchers concluded that the respondents' level of knowledge about their condition was comparable to their level of education. According to Sarah and all other authors, this assumption was confirmed by the theory (Rohmaniah et al., 2022) that if respondents are knowledgeable, they will seek health information to reduce their anxiety. In addition, this is also useful for respondents in seeking information on how to deal with the difficulties of life with kidney failure. The goal of increasing respondents' sense of control and overcoming barriers to self-management can be achieved by seeking strategies to increase respondents' sense of *self-efficacy*. This includes the need for trust in information and communication about chronic kidney failure.

### Self-Efficacy Of Ckd Patients At Djasamen Saragih Regional General Hospital With Hd <1 Year

The results of the study show that 66.7% (22 people) of CKD patients at Djasamen Saragih Regional General Hospital with HD <1 year have moderate self-efficacy, 21.2% (7 people) have high self-efficacy, and 12.1% (4 people) have low self-efficacy. These results are not in line with Welly & Rahmi (2021), whose study showed that 33 participants (63.6% of responses) had high *self-efficacy*, while according to a study by Wa Ode (2020), twenty respondents (66.7%) reported strong *self-efficacy*, while ten (33.3%) had low *self-efficacy*. It also does not align with the research conducted by Khoiriyah (2020), which found that chronic kidney failure patients had the highest *self-efficacy*, with 41 people (71.9%) having high *self-efficacy* and 16 people (28.1%) having low *self-efficacy*.

"Individual *self-efficacy* in a scenario encompasses reciprocal behaviour, environment, , and cognitive processes. The ability to perform a behaviour to achieve the desired outcome is directly proportional to one's ability. Another definition of *self-efficacy* is the belief that one can influence one's own functioning and environment." If you experience setbacks, your *self-efficacy* will determine the actions you choose, the amount of effort you put into the activity, how long you persevere in the face of challenges and failures, and your resilience throughout the process (Fitri Mailani, 2022). Chronic kidney failure patients often struggle with finances, work, sexual desire, depression, fear of death, and lifestyle adjustments. These obstacles affect a person's zest for life and cause psychological problems in patients. Therefore, chronic kidney failure patients need *self-efficacy*.

Researchers argue that patients with high self-efficacy should maintain and improve it by adopting a "healthy lifestyle and following the advice of doctors and other health professionals". Researchers assume this because haemodialysis patients with chronic kidney failure require *self-efficacy*. Long-term therapy or treatment to improve quality of life and *self-efficacy* requires self-awareness. This is in line with Sri's (2020) idea that "the higher the *self-efficacy*, the higher" the respondents' compliance in undergoing haemodialysis, and patients require adequate support to





develop *self-efficacy*, which makes respondents more confident. Additionally, this study found that patients require a higher level of *self-efficacy* to improve patient compliance with haemodialysis protocols.

#### Patient Compliance In Ckd Patients Undergoing Hd For < 1 Year

The results showed that the majority of CKD patients undergoing HD for < 1 year, 97% (32 people), were compliant with treatment, while 3% (1 person) were non-compliant. This is in line with the study by Ibrahim et al. (2022), which stated that out of 90 respondents, 87 people had a good quality of life with a percentage of 96.7%. This study also stated that quality of life is a subjective perception of happiness and aspects of life that are considered important by a person. Quality of life encompasses six main elements: physical health, psychological health, independence, social relationships, and relationships with the environment.

The results of this study differ from those of a study conducted at Rasyida Hospital in Medan, where some patients did not comply with haemodialysis after the questionnaire was administered. Of the 46 respondents, 26 (56.5%) did not comply. The behaviour of non-compliant patients was the opposite of that of compliant patients. Non-compliant patients only undergo therapy once a week, refuse to follow the doctor's instructions, and refuse to maintain a healthy lifestyle, such as restricting fluid intake. Tiar (2022) adds that patients who are non-compliant with haemodialysis therapy typically present with complaints of shortness of breath and swelling due to the accumulation of metabolic waste products and fluid in the body, which inevitably affects their quality of life. Compliance itself can be influenced by several factors. Therefore, for non-compliant patients, education about the importance of haemodialysis therapy to treat their condition is necessary. The role of nurses is also crucial for patients undergoing haemodialysis through communication and providing information about medication and haemodialysis therapy, as well as reassuring patients to be more compliant with their therapy.

According to the researcher's assumption, based on the study conducted at the Djasamen Saragih Regional General Hospital HD unit, the majority of patients fall into the compliant category. Several factors influence patient compliance in undergoing treatment. Based on the researcher's observations in the HD unit, patients accompanied by family members and the support provided by their families will increase patient compliance in undergoing treatment. Patient knowledge about the disease and therapy. Support from health workers (communication, empathy) and the comfort of service facilities (access, cost, comfort).

#### The Relationship between *Self-Efficacy* and Treatment Compliance among CKD Patients at Djasamen Saragih Regional General Hospital, Pematang Siantar

Based on the results of statistical testing using Spearman's test, it was found that N was 33. The Sig. (2-tailed) value was  $0.853 > 0.05$ , so it can be concluded that there is no relationship between *self-efficacy* and treatment compliance among CKD patients at Djasamen Saragih Pematang Siantar Regional General Hospital. These findings are inconsistent with those of Muhammad et al. (2024) at *Muhammadiyah PKU Gamping Hospital*, who found a positive correlation between self-efficacy and quality of life ( $r = 0.240$ ,  $p = 0.029$ ). The study by Maghfiroh, I. L., Hanafi, A. A., & Rokhman, A. (2020) showed a very strong relationship ( $r = 0.933$ ,  $p = 0.000$ ) between self-efficacy and quality of life. The study by Nurhayati, S. N., & Utami, I. T. (2022) found a significant relationship between the two ( $p = 0.001$ ) at North Jakarta Hospital.

Increased *self-efficacy* in patients with kidney failure will improve the quality of life of haemodialysis patients. This can be demonstrated by facing every challenge, learning from mistakes, and not becoming obsessed with therapy. Patients can be encouraged to be consistent and compliant in carrying out all stages of therapy if they have a high level of *self-efficacy*. This can help in the process of overcoming health problems that develop at various levels, including physiologically, psychologically, socially, and environmentally. Conversely, low levels of *self-efficacy* can cause patients to experience a decline in quality of life. This is because patients doubt their recovery. Patients are always tormented by their condition and cannot accept life. Even if they are physically capable, patients may choose not to attend social events (Rohmaniah & Sunarno, 2022).

Shinta in Yusrita (2022) mentions that renal replacement therapy, often referred to as haemodialysis, is a treatment performed with the help of a dialysis machine. This treatment is popular among patients with chronic kidney failure. Surgery to remove metabolic waste or toxins from the blood is haemodialysis. This group contains water, salt, potassium, hydrogen, urea, creatinine, uric acid, etc. A semi-permeable membrane separates blood and dialysate fluid in the artificial kidney for diffusion, osmosis, and ultrafiltration (Fitri Mailani, 2022). During haemodialysis, healthcare professionals can provide counselling. Behavioural counselling can be given to patients with low *self-efficacy*. This counselling can be used as an option to help patients overcome their low *self-efficacy*.

Patients undergoing treatment need self-management, namely information management, treatment, lifestyle and social support. Self-management is an individual's behaviour to maintain and improve their own health. Because patients live with chronic diseases for a long time, they have a strong need to be independent in their self-care. Therefore, self-management awareness is an important intervention for patients with chronic disease management (Fathi Ibrahim Mohammed et al., 2020). To improve self-management in patients with chronic diseases, good self-efficacy is required. Patients with terminal illnesses must have good self-efficacy to improve their quality of life. Strategies that can improve the condition of patients with certain diseases are to increase their level of self-efficacy.





Self-efficacy is described as belief in oneself and the ability to achieve success in certain conditions (Sari et al., 2020). Low self-efficacy can be associated with non-compliance in undergoing treatment in patients with chronic kidney disease. In other words, A person with high self-efficacy will have good self-management and vice versa (Oktarina & Sulistiawan, 2020).

According to the researchers' assumption that there is no relationship between self-efficacy and treatment compliance, one of the most common treatments for chronic kidney disease (CKD) is haemodialysis. If patients do not undergo haemodialysis as directed, they will experience pain (complications). This may include scheduling haemodialysis sessions, dietary restrictions, and management. Treatment adherence refers to the extent to which patients follow the therapeutic recommendations provided by healthcare professionals, including taking medication according to dosage, timing, and frequency, as well as adhering to dietary advice, lifestyle recommendations, and routine monitoring. In CKD patients, adherence is crucial because treatment is long-term and determines quality of life and disease progression.

### CONCLUSION

Based on the study conducted at Djasamen Saragih General Hospital on CKD patients undergoing HD for less than 1 year, the following conclusions can be drawn: (1) *Self-efficacy* of CKD patients at Djasamen Saragih Regional General Hospital undergoing HD for < 1 year: 66.7% (22 people) had moderate *self-efficacy*, 21.2% (7 people) had high *self-efficacy*, and 12.1% (4 people) had low *self-efficacy*. (2) Compliance among CKD patients undergoing HD for < 1 year was high, with 97% (32 people) compliant with treatment and 3% (1 person) non-compliant. (3) Statistical test results using the Spearman test showed that N was 33. The Sig. (2-tailed) value was 0.853 > 0.05, so it can be concluded that there is no relationship between *self-efficacy* and medication adherence among CKD patients at Djasamen Saragih Pematang Siantar Regional General Hospital.

### ACKNOWLEDGMENT

1. Chairperson of the Arjuna Laguboti Development Personnel Education Foundation
2. Chairperson of the Arjuna Laguboti College of Health Sciences
3. Head of the DIII Nursing Study Programme at STIKes Arjuna Laguboti
4. General Hospital Dr. Djasamen Saragih Pematang Siantar
5. All Academic Staff of STIKes Arjuna Laguboti

### REFERENCES

- Alam, L. S., & Suci, A. (2021). Factors Affecting Community Compliance with Mask Use in the Prevention of COVID-19 in Biring Kanaya District, Makassar City, in 2019. *Hasanuddin University Nursing Journal*, 1(3)
- Bandura, A. 1997. *Self Efficacy-The Exercise of Control* (Fifth Printing, 2002). New York: W.H. Freeman & Company
- Fitri Mailani. (2022). *Self-Management Knowledge and Self-Efficacy of Chronic Kidney Disease Patients* (Fitri Mailani (ed.); 1st ed.). CV.Adanu Abimata
- Hafezieh, A., Dehghan, M., Taebi, M., & Iranmanesh, S. (2020b). Self-management, self-efficacy and knowledge among patients under haemodialysis: a case in Iran. *Journal of Research in Nursing*, 25(2), 128–138. <https://doi.org/10.1177/1744987120904770>
- Kovesdy, C. P. (2022). Epidemiology of Chronic Kidney Disease: An Update 2022. *Kidney International Supplements*, 12(1), 7–11. <https://doi.org/10.1016/j.kisu.2021.11.003>
- K Teresa et al *Chronic Kidney Disease Diagnosis and Management* 2019), pp. 1294–1304. doi: 10.1001/jama.2019.14745.Chronic.
- Kurniawan, M. S. P., Setiawati, E. M., & Harun, S. (2024). The relationship between self-efficacy and quality of life in haemodialysis patients at Muhammadiyah PKU Gamping Hospital. *Proceedings of the National Seminar on Research and Community Service LPPM Universitas 'Aisyiyah Yogyakarta*, 2, 572–577. Retrieved from <https://proceeding.unisayogya.ac.id/index.php/proseminaslppm/article/view/738>
- Maghfiroh, I. L., Hanafi, A. A., & Rokhman, A. (2020). The Relationship Between Self-Efficacy and Quality of Life in Chronic Kidney Disease Patients Undergoing Haemodialysis at Muhammadiyah Lamongan Hospital. *SURYA: Journal of Health Science Communication Media*, 12(2), 64–69. <https://doi.org/10.38040/js.v12i2.148>
- Malini, H., Efendi, F., Kadar, K. S., Lenggogeni, D. P., & Sari, Y. P. (2023). Health Literacy and Associated Factors Among Patients with Chronic Diseases in Indonesia. *Journal of Public Health (Germany)*, 0123456789. <https://link.springer.com/article/10.1007/s10389-023-02035-8>
- PAHO. (2021). "Burden of Kidney Diseases - PAHO/WHO | Pan American Health Organisation." Burden of Kidney Diseases in the Region of the Americas, 2000-2019. Pan American Health Organisation.
- Indonesian Society of Nephrology. (2024). 14th Annual Report of the Indonesian Renal Registry 2020. 1–37. [www.indonesianrenalregistry.org](http://www.indonesianrenalregistry.org)
- Pratama, B. A. (2021). Analysis of Knowledge Levels and Compliance in Implementing COVID-19 Health Protocols





- Among Students at SMP Negeri 4 Sukohar. Thesis. In Poltekes Bhakti Mulia.
- Nurhayati, S. N., & Utami, I. T. (2022). The Relationship Between Self-Efficacy and Quality of Life in Patients Chronic Kidney Failure Undergoing Haemodialysis. *Diagnosis: Scientific Journal of Health*, 17(4), 168-172. <https://doi.org/10.35892/jikd.v17i4.1061>
- Nursalam. (2022). *Research Methodology in Nursing Science*. Jakarta: Selemba.
- Medika Rizkya. (2020). Self-Efficacy Towards Intradialytic Hypertension in Patients with Kidney Failure.
- Rohmaniah, F. A., & Sunarno, R. D. (2022). Self-Efficacy to Improve the Quality of Life of Chronic Kidney Failure Patients Undergoing Haemodialysis. *Journal of Nursing and Midwifery Science*, 13(1), 164. <https://doi.org/10.26751/jikk.v13i1.1305>
- Sahuri, Andini, I. S., & Agustin, Wahyu Rima, K. (2019). The Relationship Between Self-Efficacy and Quality of Life in Chronic Kidney Failure Patients Undergoing Haemodialysis Therapy at Sukoharjo Regional General Hospital. *Kusuma Husada Health Journal*, 2, 1–7. <https://doi.org/10.34035/jk.v10i1.346>
- Sari, F.-, Raveinal, R., & Apriyanti, E. (2020). The Characteristic Description of Compliance With Fluid Limitation, Interdialytic Weight Gain (IDWG), and Quality of Life in Haemodialysis Patients in Palembang City. *International Journal of Nursing and Midwifery Science (IJNMS)*, 4(2), 132–140. <https://doi.org/10.29082/ijnms/2020/vol4/iss2/300>
- Suwanti, Yetty, F. Aini. (2017). The relationship between self-efficacy and family social support with coping mechanisms in chronic kidney failure clients undergoing haemodialysis
- Sugiyono, (2022), *Quantitative and Qualitative Research*, Alfabet
- Welly, W., & Rahmi, H. (2021). Self-Efficacy and Quality of Life in Chronic Kidney Failure Patients Undergoing Haemodialysis. *Abdurrah Nursing Journal*, 5(1), 38–44. <https://doi.org/10.36341/jka.v5i1.1791>
- Wulandari. (2020). Description of Self-Efficacy in Chronic Kidney Failure Patients Undergoing Haemodialysis Treatment in the Haemodialysis Room of Dr. Wahidin Sudirohusodo General Hospital, Makassar. 1–26. <http://repository.unhas.ac.id/>