

## Conference Paper

# Adherence to Hemodialysis Therapy, Self-efficacy and Quality of Life of Chronic Kidney Disease Patients in the Hemodialysis Room

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Hemodialysis is a renal replacement therapy that can prolong a patient's life. The study aims to determine the relationship between adherence to hemodialysis therapy and self-efficacy with the quality of life of patients with chronic kidney disease in the hemodialysis room of the Cilegon City Hospital in 2019. This study used a quantitative design with a cross-sectional. The population of this study was composed of patients with chronic renal failure who underwent hemodialysis therapy. The number of samples were 47 respondents using the total sampling technique. The method used in this study was the Chi-square test. The results showed that 20 patients did not adhere to hemodialysis therapy (42.6%), self-efficacy (44.7%), poor quality of life was 21 patients (44.7%). A significant relationship was observed between adherence to hemodialysis therapy (P-value = 0.001), self-efficacy (P-value = 0.003), and quality of life. Future researchers are expected to continue this research with different research methods.

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## 1. Introduction

Chronic Kidney Disease (CKD) is one of the most pressing health problems in the world. The occurrence of CKD is a risk of heart and blood vessel disease and increases morbidity and mortality [1]. Based on data from the Centers for Disease Control and Prevention in 2019, it is predicted that an estimated 15% of adults in the United States suffer from CKD, which is about 37 million people. One in two people with very low kidney function who are not on hemodialysis. Based on the 2018 Riskesdas data, it shows that CKD in Indonesia is 3.8‰ per 1,000 population. Meanwhile, in Banten Province, the prevalence of CKD is 2.5‰ per 1,000 population. Data on visits by CKD

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patients at the Cilegon City Hospital for the period January - September 2019 were 2,911. Patients with hemodialysis therapy as many as 47 patients.

Hemodialysis is the most common kidney replacement therapy that can extend the patient's life. But hemodialysis cannot restore the patient's condition to its original state, so patient must to adhere hemodialysis therapy according to a predetermined schedule[2]. Adherence to therapy in CKD patients undergoing hemodialysis is an important thing that must be considered. Disobedient patient in hemodialysis therapy will be a buildup of harmful substances from the body as a result of metabolism in the blood. This condition will make patient feel pain all over the body and its cause death. Disobedient in hemodialysis therapy can cause patients suffer from complications disease that interfere with their quality of life[2].

The World Health Organization Quality of Life (WHOQOL) in 2016 said that quality of life is an individual's perception of his abilities, limitations, symptoms and psychosocial characteristics of his life in the context of culture and value systems to carry out his roles and functions. Quality of life of CKD patients with hemodialysis can be influenced by many factors. Those factors are knowledge, education level, family support, age, adherence in hemodialysis therapy and also self-efficacy [3]–[5]. Self-efficacy aims to provide confidence that a person will be successful in performing health care as long as optimally in carrying out activities that support health status. Individuals with self-efficacy higher can mobilize the patient's personal and social resources to maintain a better quality of life. The previous study stated that patients with higher self-efficacy more adherence than patients with lower self-efficacy[4]. Adherence in hemodialysis therapy will be affect the quality of life of CKD Patients. Patients who adherence in hemodialysis therapy are significantly associated with quality of life [6].

The purpose of this study was to determine relationship between adherence to hemodialysis therapy and self-efficacy with the quality of life of CKD patients in the Hemodialysis Room of the Cilegon City Hospital in 2019.

## 2. Methods

## 2.1. Study Design

The type of research used is quantitative through a cross sectional approach. Research variables consist of independent and dependent. Independent variables are an adherence to hemodialysis therapy and self-efficacy. Dependent variable in this research is quality of life.

## 2.2. Sample

The population in this study were CKD patients with hemodialysis therapy in the Hemodialysis Room of the Cilegon City Hospital from January to September 2019 totaling 47 patients. The sampling technique in this research is total sampling. This research was conducted in the Hemodialysis Room at the Cilegon City Hospital. This research was conducted in November 2019.

## 2.3. Instrument

The questionnaires used in this study were hemodialysis compliance, self-efficacy, and quality of life questionnaires.

## 2.4. Data Collection Procedure

The data collection technique uses primary data, through the administrative stage of research licensing, prior coordination with the head of the room. This research was conducted in two shifts, namely the morning shift and the afternoon shift. Then, the researcher approached and provided an explanation of the research objectives and how to fill out the questionnaire. During filling out the questionnaire, the researcher was beside the respondent to ensure that the questionnaire was filled out honestly. Respondents who cannot read, the questionnaire will be read out by the researcher without affecting the answers of the respondents. Then, the researcher took back the questionnaire sheet that had been distributed for analysis.

## 2.5. Data Analysis

Research data were analyzed using univariate and bivariate with chi-square test approach.

## 3. Results

Overview of self-efficacy, adherence with hemodialysis therapy for CKD patients and quality life in the Hemodialysis Room at the Cilegon City Hospital in 2019 are as follow:

TABLE 1: Description of univariate variable.

Variables	Frequency (n)	Percentage (%)
Quality of Life Poor Good	21 26	44,7 55,3
Hemodialysis Therapy Non adhere adhere	20 27	42.6 57.4
Self-Efficacy Low High	21 26	44.7 55.3
Quality of Life Poor Good	21 26	44.7 55.3
<b>Total</b>	<b>47</b>	<b>100</b>

Source: Primary Data 2019

Based on Table 1, shows that respondents who have good in quality of life as many as 55.3%, who have adhere were 57.4%, respondents who have self-efficacy are 55.3%, have a good quality of life as many as 55.3%.

TABLE 2: Relationship of adherence to hemodialysis therapy, self-efficacy with quality of life of CKD patients.

Variables	Quality of Life				Total		Pvalue	OR
	Poor		Good		n	%		
	n	%	n	%				
<b>Adherence to Hemodialysis therapy</b>							0.001	10.500 (2.697-40.879)
<b>Non adhere</b>	15	75.0	5	25.0	27	100		
<b>Adherence</b>	6	22.2	21	77,8	27	100		
<b>Self-Efficacy</b>								
<b>Low</b>	15	71.4	6	11.6	21	100	0.003	8.333 (2.238-31.033)
<b>High</b>	6	23.1	20	76.9	26	100		

Source: Primary Data 2019

Based on table 2, it can be seen that respondents who don't adhere to hemodialysis therapy have a lower quality of life than those who adhere (75.0%). Respondent with

low self-efficacy have a lower quality of life. The results of statistical tests showed that there was a significant relationship between adherence to hemodialysis therapy and self-efficacy with the quality of life of CKD patients. Respondents who do not adhere to hemodialysis therapy have a 10 times risk of having a poor quality of life compared to patients who adhere to hemodialysis therapy.

## 4. Discussion

Quality of life is a perception of individual about human position in their life those relation with the culture and value system in order to reach their aims, hopes, standars and concerns. [7]. Based on the results of this study, respondent who have good of quality of life higher than those who poor of quality of life. In this research, quality of life measured based on physical health, psychological well-being, social relations and environmental relationship dimensions.

Based on the results of this study, most of respondents have good in physical health dimensions (55.3%). According this research, respondents had experienced in physical activities. Respondents began to be able to carry out physical activities. Respondents were able to adapt to life and health conditions after therapy even though the energy is reduced. Based on the results of this study, the dimensions of psychological well-being in the good category were (57.4%). Respondents feel that life is more meaningful, they sharing experiences each other. Respondents were more able to accept situation and did not make CKD a burden on their minds, but accept with sincere. Patient experiences during hemodialysis therapy, ability in physical daily activity after therapy gave their motivation to improve of quality of life[8].

The dimensions of social relations in the good category. Depend on interview with respondents, they said that personal/social relationships are satisfactory. While patients CKD in hemodialysis therapy having good social relationships because the majority of respondents were given support from family, friends, nurses, and doctors. Their support is a motivation to patients that can improve quality of life[6].

The dimensions of the relationship with the environment in the good category as much as 53.2%. Most of respondents said that they are having enough money for their daily needs. According to the results, respondents having an environmental dimension is due to having sufficient funds (money) for daily needs so that access to health services is easier and transportation is adequate to hemodialysis therapy.

Quality of life in CKD patients is influenced by many factors including family support, health workers, funding, knowledge, disease duration, age, sex, obesity, medical record, self-efficacy and also adherence to hemodialysis therapy [5], [6], [9], [10]. According to this study, the factors that correlation with quality of life are adherence to hemodialysis therapy and self-efficacy.

Adherence to hemodialysis therapy significantly to increase quality of life[6]. Patients adherence to hemodialysis therapy caused by level of understanding and awareness about the importance of hemodialysis. Hemodialysis is a process used to remove fluids and waste products from the body when the kidneys cannot do this[11]. Hemodialysis is the process of cleaning the blood from metabolic waste and excess fluids with the help of an artificial kidney and a hemodialysis machine. The duration of hemodialysis is between 4 and 5 hours, carried out 2 times a week[12]. The goal of hemodialysis is to maintain the patient's life and well-being. Hemodialysis therapy can't replace of kidney function. This research also shows that patient who adhere to hemodialysis higher in quality of live and significantly correlation with quality of live. This research in line with previous research that state there is a significant relationship between adherence to hemodialysis therapy and quality of life[13].

Adherence to hemodialysis therapy very depend on family support. Based on the results of this study, family emotional support will motivate to the respondent's condition. Emotional support from family also shown by caring about the complaints experienced after hemodialysis therapy, reminding respondents to take medication on time, reminding to drinking restriction program and following appropriate eating recommended by health workers. Family support in financial problems obtained by respondents in the form of taking respondents to the hospital with adequate transportation and even bringing food, drinks, and medicines. Family support makes respondents feel better, regain their confidence.

The results of this study state that there is relationship between self-efficacy with quality of life. Self-efficacy is individual's belief or self-recognition in capability to reach the goals or to carry out of special task[14]. There are many factors influences on self-efficacy, among them; life exsperience, emosional and psychological state, family support, sosial support, motivation, physical health etc[14]–[16].

Based on this research, self-efficacy in CKD Patients is due to the experience of other people. Respondents usually tell each other about their respective experiences in dealing with their condition. This causes respondents to feel confident that they can

overcome the conditions they are experiencing. Another factor is verbal persuasion from nurse. Providing care while hemodialysis therapy will motivate respondents to keep the spirit and keep patient's motivation. Self-efficacy is significantly related with quality of life in CKD Patients. This study in line with previous study[16]. Psychological condition of CKD Patients need to be maintenance. Hemodialysis process causes decreased physical condition such as a weak body, easily tired, and unsatisfactory sleep. This declining physical condition makes respondents depend on other people and dialysis machines. These physical limitations make psychological problems. Some time, respondents feel worried about bad things that will happen to them and feel a burden since hemodialysis therapy.

## 5. Conclusion

There is a significant relationship between adherence to hemodialysis therapy and self-efficacy with quality of life of CKD patients in the Hemodialysis Room at the Cilegon City Hospital.

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This research is selffunded.

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## 7. Conflict of Interest

There is no conflict of interest in this research.

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