



THE CORRELATION OF FAMILY SUPPORT WITH ANXIETY LEVEL IN CHRONIC KIDNEY DISEASE (CKD) PATIENT UNDERGOING HEMODIALYSIS DURING THE COVID-19 PANDEMIC

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ABSTRACT

During the COVID-19 pandemic, major changes occurred in all aspects of life, requiring every individual to adapt to new situations and this led to various psychological problems, one of which was increased anxiety. This also has an impact on patients with chronic renal failure or chronic kidney disease (CKD) who have to undergo hemodialysis in the hospital, so to overcome anxiety, the role or support of the family is needed. This study was to determine the correlation between family support and anxiety in CKD patients undergoing hemodialysis during the COVID-19 pandemic. Design was correlation research with cross sectional design. The population is CKD patients undergoing hemodialysis at Bhayangkara Hospital and Labuang Baji Hospital Makassar, totaling 51 people. Sampling was done by consecutive sampling. The number of samples is 45 respondents. Data collection was carried out using a questionnaire which was an adaptation of the Zung Self-Rating Anxiety Scale instrument and a family support questionnaire developed by Nursalam. Validity and reliability tests were carried out on 30 respondents and obtained the results of the questionnaire r value on all statement items ranging from 0.397 - 0.924, ($r_{count} > r_{table}$) and Cronbach alpha value of 0.903, it was concluded that all statement items on the anxiety level questionnaire were valid and reliable to use. For the family support questionnaire, the r value on 20 statement items ranged from 0.619 - 0.927 with a Cronbach alpha of 0.961 so it was concluded that the questionnaire was valid and reliable to use. The data in this study were analysed using SPSS Version 22 software. Statistical tests using the Gamma correlation test showed a p value = 0.001 and an $\alpha = 0.05$ ($p < \alpha$) and a correlation value of 0.752. Based on the results of statistical tests, it can be concluded that there is a significant correlation between family support and anxiety in patients with chronic renal failure undergoing haemodialysis during the COVID-19 pandemic and shows a strong correlation.

Keywords: anxiety; CKD; family support; hemodialysis

How to cite (in APA style)

Pailungan, F. Y., & Kada, M. K. R. (2025). The Correlation of Family Support with Anxiety Level in Chronic Kidney Disease (CKD) Patient Undergoing Hemodialysis During the Covid-19 Pandemic. Indonesian Journal of Global Health Research, 7(1), 1053-1060. <https://doi.org/10.37287/ijghr.v7i1.5569>.

INTRODUCTION

The World Health Organization (WHO) announced Coronavirus Disease 2019 (COVID-19) as a pandemic on March 16, 2019. In Indonesia, the first case of COVID-19 was reported on March 2, 2020 with two cases. On June 30, 2020 the number of positive COVID-19 cases was 56,385 cases, 24,806 cases recovered and 2,876 cases died, (Ministry of Health of the Republic of Indonesia, 2020). Based on the data obtained, of all COVID-19 patients who died, around 91.9% had comorbidities such as kidney disease, diabetes, chronic lung and heart disease. of the number of COVID-19 infected patients who died, the most cases were accompanied by chronic kidney failure (Kemenkes RI, 2020).

Chronic Kidney Disease (CKD) is a progressive and irreversible disorder of kidney function in which the body fails to maintain metabolism and fluid and electrolyte balance, causing uremia, (Black & Hawks, 2014). According to WHO, CKD contributes to the burden of world disease with a mortality rate of 850,000 people per year, based on the results of basic health research (Rikesdas) in 2018 showing that the prevalence of CKD in Indonesia in 2018 has increased, where in 2013 the prevalence was around 2.0% while in 2018 it was 3.8%. of this prevalence rate 19.3% have or are undergoing hemodialysis, (Kemenkes RI, 2018). Based on data from IRR (2017), in Indonesia there are 77,892 patients who are actively undergoing hemodialysis and around 30,843 patients who are new to hemodialysis. In 2018, patients undergoing dialysis or hemodialysis experienced a drastic increase of around 2,754,409 people from the previous year of around 1,694,432 people (PENEFRRI, 2018).

Based on the results of the 2013 Riskesdas data, South Sulawesi became the fifth patient with kidney failure, which amounted to 0.3%. Meanwhile, based on IRR (2018) South Sulawesi is ranked 13th in Indonesia which has CKD patients who have just undergone hemodialysis as many as 1317 people and is second in Sulawesi after North Sulawesi. Meanwhile, according to the results of Riskesdas in 2018, South Sulawesi is the 7th sufferer of chronic kidney failure, which is 0.37% and ranks 6th with chronic kidney failure patients undergoing Hemodialysis after West Java, Central Java, East Java, DKI Jakarta and North Sumatra, (Kemenkes RI, 2018). Hemodialysis action cannot cure or restore kidney function permanently but can reduce the risk of damage to other vital organs due to the accumulation of toxic substances in the circulation so that hemodialysis can extend the patient's life, (Zurmeli et al., 2015). Patients with chronic kidney disease who undergo hemodialysis will experience psychological disorders, one of which is anxiety. Anxiety in those undergoing hemodialysis occurs due to worry or fear of something happening in the future, worrying about being left alone and thinking about dying soon and this anxiety is increasing during the Covid-19 pandemic, (Wakhid & Suwanti, 2019) (PH et al., 2019).

This is evidenced by the results of observations and interviews conducted with several nurses in the HD room at one of the hospitals in Makassar who said that during the Covid-19 pandemic, the nurses were worried about being left alone. During the pandemic, there was a decrease in dialysis patients, especially in August, by around 5%. This is due to the patient's anxiety about being exposed to COVID-19 even though the patient has to dialysis 2-3 times a week. In this case, the role of family is very important for CKD patients undergoing hemodialysis. Patients can know that there are families who pay attention, support and love. The role of the family is to provide support and attention such as escorting or accompanying patients during hemodialysis, reminding hemodialysis schedules. (Al Aziz & Sudiro, 2017) From the description of the background above, the researcher formulates the research problem, namely "Is there a correlation between family support and anxiety levels in patients with CKD undergoing hemodialysis during the COVID-19 pandemic?". The purpose of this study was to determine the correlation between family support and anxiety levels in patients with CKD undergoing hemodialysis during the COVID-19 pandemic.

METHOD

This study is a quantitative study with a correlational research design, namely to analyze the relationship between the independent variable and the dependent variable, the study has a correlation design with a cross sectional study approach. This research was conducted in the Hemodialysis room of Bhayangkara Hospital and Labuang Baji Hospital Makassar. The research time was from June to July 2021.

The population in this study consists of all chronic kidney failure patients undergoing hemodialysis at Bhayangkara Hospital and Labuang Baji Hospital in Makassar, totaling 51 individuals. The sampling technique used in this study is consecutive sampling, and using Slovin's formula, the sample size is 45 participants. The sample criteria set in this study include inclusion and exclusion criteria, where the inclusion criteria are: patients who are compos mentis, willing to be respondents, and patients who do not have hearing impairments and can communicate verbally. The exclusion criteria are respondents who withdraw before completing all instruments. The instruments used in this study are those that have been adapted from standard instruments and have undergone validity and reliability testing. To measure anxiety levels, a questionnaire adapted from the Zung Self-Rating Anxiety Scale is used, and the family support questionnaire is adapted from the family support instrument developed by Nursalam.

Before collecting data, the researcher conducted a questionnaire test using 30 respondents. In the anxiety level questionnaire test, the calculated r value on all statement items ranged from 0.397 - 0.924, so that the calculated r value $>$ r table, it was concluded that all statement items on the anxiety level questionnaire were proven valid and the Cronbach alpha value was 0.903 which indicated that this questionnaire had high reliability. For the family support questionnaire, the calculated r values on the 20 statement items ranged from 0.619 - 0.927 with a Cronbach alpha of 0.961 so it was concluded that the questionnaire was valid and reliable to use.

An explanation regarding the questionnaire and asking for consent from respondents was carried out before filling out the questionnaire. The questionnaire was filled in by each respondent with the assistance of the researcher. Data analysis in this study was univariate and bivariate analysis. Univariate analysis was carried out on the characteristics of respondents, dependent variables and independent variables in the form of frequency distribution. Bivariate analysis was conducted to prove the research hypothesis. The hypothesis test in this study was the Gamma correlation test with a significance level, $\alpha = 0.05$. The data in this study were analysed using SPSS 22 application software.

RESULT

Characteristics of Respondents

Table 1 shows that the distribution of respondents based on age is mostly in the age range of 41-60 years, namely 27 people (60.0%), the distribution of respondents based on gender is mostly male, namely 23 people (51.1%). Based on education, most respondents had high school education, namely 17 people (37.8%) and college (37.8%), most respondents did not work, namely 22 people (44.5%). Based on marital status, most respondents were married, namely 41 people (91.1%). most respondents underwent hemodialysis 2 times a week, namely 33 people (73.3%) and the majority of respondents underwent hemodialysis for less than a year, namely 23 people (51.1%).

Table 1.
Frequency distribution based on respondent characteristics (n=45)

Characteristics of Respondents	f	%
Age (year)		
< 21 years	1	2,2
21-40 years	9	20,0
41-60 years	27	60,0
61-80 years	8	17,8
Gender		
Male	23	51,1
Female	22	48,9
Last Education		
Elementary	8	17,8
Junior High	3	6,6
Senior High	17	37,8
College	17	37,8
Occupation		
Civil Servants	9	20,0
Private employee	5	11,1
Honoror	1	2,2
Self-employed	6	13,4
Driver	1	2,2
Farmer	1	2,2
Not employed	22	48,9
Married Status		
Married	41	91,1
Not Married	4	8,9
HD Frequency		
3x/week	11	24,5
2x/week	33	73,3
1x/week	1	2,2
Length of HD		
< 1 year	23	51,1
1-5 years	19	42,2
>5 years	3	6,7

Family support

Table 2.
Overview of Family Support for patients with CKD undergoing Hemodialysis during the COVID-19 pandemic (n=45)

Family Support	f	%
Good	24	53,3
Sufficient	17	37,8
Defficient	4	8,9

Table 2 shows a picture of family support where most respondents have good family support, namely 24 people (53.3%).

Anxiety

Table 3 shows that most respondents have mild anxiety, namely 31 people (68.9%).

Table.3

Anxiety of CKD patients undergoing hemodialysis during the COVID-19 pandemic (n=45)

Anxiety	f	%
Mild	31	68,9
Medium	13	28,9
Heavy	1	2,2

Bivariate Analysis Results

Table.4

The relationship between family support and the anxiety level of CKD patients undergoing hemodialysis during the COVID-19 pandemic (n=45)

Family Support	Anxiety						Total		Correlation Coefficient	P value
	Mild		Medium		Heavy		F	%		
	f	%	f	%	f	%				
Good	1	2,2	2	4,4	1	2,2	4	8,9	0,752*	0,001*
Sufficient	9	20	8	17,8	0	0	17	37,8		
Defficient	21	46,7	3	6,7	0	0	24	53,3		
Total	31	68,9	13	28,9	1	2,2	45	100		

***Gamma Correlation Test**

Table 4. shows that of the 45 respondents, most had good family support with mild anxiety, namely 21 people (46.7%). Statistical tests using the Gamma Correlation, showed a p value of 0.001, where the p value <0.05, this indicates that Ha is accepted, meaning that there is a significant relationship between family support and anxiety in patients with chronic kidney disease undergoing hemodialysis during the COVID-19 pandemic, the correlation value of 0.752 indicates a strong correlation.

DISCUSSION

This study obtained positive results related to family support and anxiety levels of chronic kidney disease patients undergoing hemodialysis, where most respondents (46.7%) had good family support and had mild anxiety. This shows that good family support will alleviate anxiety. Based on the results of statistical tests using the Gamma correlation test, it was found that there was a significant relationship between family support and the anxiety level of chronic kidney disease patients undergoing hemodialysis with a p value of 0.001, in addition to the correlation test results obtained of 0.75, this means that there is a strong correlation between family support and the anxiety level of respondents. This shows that the better or greater the family support, the lower or lighter the anxiety level, and vice versa, the less family support, the higher the anxiety level, (Al Aziz & Sudiro, 2017).

Hemodialysis is a lifelong therapy for patients with chronic kidney failure in order to survive. The process is stressful and causes many social and psychological problems. One of the common psychological problems in chronic kidney disease patients undergoing hemodialysis is anxiety (Beaini et al., 2021). Anxiety is triggered by several things such as feeling worried about the unpredictability of their illness, anxiety about relationships with partners, anxiety about their marriage, children they have and the burden it places on the family, In addition, what adds to the anxiety of hemodialysis patients is financial problems and difficulties in maintaining employment (Silaban & Perangin-angin, 2020), (Jangkup, Elim & Kandou, 2015). The problem of anxiety is increasing with the Covid-19 Pandemic, this can be seen in the results of research conducted by (Beaini et al., 2021) on the impact of the SARS-CoV-2 pandemic on the mental health of hemodialysis patients. Another similar study found that patients undergoing hemodialysis during the pandemic mostly experienced mental health problems such as anxiety, depression, sleep disturbances and fatigue (Naamani et al., 2021).

According to Friedman, (2010) To overcome the anxiety problem of patients undergoing hemodialysis, it must involve the closest person, and the closest person to the patient is his family. Family support is very important for patients who are undergoing treatment including kidney failure patients undergoing hemodialysis because every patient needs acceptance from the family for their current situation, patients need more attention and love. With high family support, patients will feel calmer and more comfortable in undergoing treatment. In addition, with family support, patients can express and express their fear and anxiety so that their anxiety decreases. This is the reason why family support can affect patient anxiety. This study is in line with research conducted by (Al Aziz & Sudiro, 2017) which found that family support has a significant relationship with anxiety levels in patients undergoing hemodialysis. The higher the family support, the lower or no anxiety will be. Family motivation is very important in reducing patient anxiety, especially in chronic kidney failure (CKD) patients undergoing hemodialysis.

Another study that supports the results of this study is research conducted by (Zurmeli et al., 2015), the results of which show that there is a relationship between family support and the quality of life of CKD patients undergoing hemodialysis therapy. Patients who have positive or good family support 3.7 times have a good quality of life compared to patients whose family support is lacking. However, this study also found the opposite, namely there were 2.2% of respondents who lacked family support but had mild anxiety, this could be caused by various factors, one of which was the length of undergoing Hemodialysis, where the respondent obtained data had undergone Hemodialysis for 8 years. Based on the results of the researcher's interview with respondents who have been undergoing hemodialysis for a long time, the patient said that he was used to hemodialysis therapy, the respondent also said that this therapy had to be done to prolong his life even during the COVID-19 pandemic so that he always tried to control his anxiety.

This study is in line with the opinion of Sinay & Lilipory, (2019) which states that chronic kidney disease patients who have undergone hemodialysis therapy for more than 6 months have reached the accepted stage and have been able to adjust to their disease. The longer the hemodialysis therapy, the more time the patient will get used to the process undergone during hemodialysis (Zurmeli, Bayhakki & Utai, 2015). In the research of Al Husna, Rohma & Pramesti (2021) and Rahayu, Ramlis & Fernando (2018), it was found that there was a significant relationship between the length of time undergoing HD and the level of anxiety. The longer the patient undergoes HD, the lower the anxiety level because patients who have been undergoing HD for a long time are increasingly able to adapt to the HD machine and process. The longer patients undergo hemodialysis, the more knowledge and experience they gain and are more adaptive to stressors.

CONCLUSION

Based on the results of statistical tests, it can be concluded that there is a significant relationship between family support and anxiety in patients with chronic kidney disease undergoing hemodialysis during the COVID-19 pandemic and shows a strong correlation.

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