

# The Relationship Between Family Support And Anxiety Levels In Children Aged 5–18 Years With Chronic Kidney Disease At Haji Adam Malik Hospital Medan

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## ABSTRACT

Anxiety is a problem characterized by refusing to be given nursing care, sleep disturbances, restlessness, worry, fear, and decreased appetite. The presence of family support can reduce the patient's anxiety level and influence the level of support they receive. This study aims to examine the correlation between family support and anxiety levels in children aged 5–18 years with chronic kidney disease (CKD) at Haji Adam Malik Hospital, Medan. This type of research is a correlation analysis with A cross-sectional approach, with total sampling (n = 73) employed. Family support and anxiety levels were measured using validated questionnaires. From the data, 18 people (24.7%) had good family support with anxiety in children, 10 people (13.7%) in the non-anxious category, 6 people in the mild anxiety category (8.2%), and 2 people in the moderate anxiety category (2.7%). Of the 37 people (50.7%) who have sufficient family support, 5 people (6.8%) are not anxious in the child's anxiety category, 22 people are in the mild anxiety category (30.1%), and 10 people are in the moderate anxiety category (13.7%). Of the 18 people (24.7%) who had less family support with anxiety in children in the non-anxious category, 3 people (4.1%), in the mild anxiety category, and 5 people. Results showed a significant correlation between family support and anxiety levels ( $p = 0.000$ ,  $r = 0.421$ ). Strengthening family support is recommended to reduce anxiety in pediatric CKD patients.

**Keywords:** Family Support, Anxiety for CKD Children, Anxiety.

## INTRODUCTION

Chronic kidney failure is a health condition that is often experienced by children. This condition can be acute or chronic. Trigger factors that can cause kidney failure in children are caused by the child's body's fluid needs not being met for a long period, the presence of certain kidney diseases, such as acute kidney inflammation, glomerulonephritis, and the like, congenital diseases from biological parents, such as hypertension and diabetes, side effects of certain drugs and suffering from hemolytic uremic syndrome small blood vessels in the kidneys become inflamed and damaged (1).

According to data from the World Health Organization (WHO), chronic kidney disease causes the death of around 850,000 people each year, making it the 12th leading cause of death in the world. In 2021, there were 697.4 million people with chronic kidney failure globally, with 86 million of them (12.3%) undergoing hemodialysis, and the death rate

reached 1.2 million cases. In 2022, the number of sufferers increased to 843.6 million, with 115.2 million people (13.6%) undergoing hemodialysis, and the death rate reached 1.4 million. In 2023, the number of people with chronic kidney failure continued to rise to 895.6 million people, with 129 million of them (14.4%) undergoing hemodialysis, and the death rate reached 1.5 million cases (2).

Chronic kidney failure sufferers in North Sumatra have ranked third as the province with the most chronic kidney failure sufferers, after West Java and East Java. North Sumatra chronic kidney failure sufferers reached 0.33% (45,792) with an age range of  $\geq 15$  years. In this description, the number of men is around 355,726 people, while women is around 358,057 people (Risksdas 2023). Family support is an action to provide motivation, guidance, learning facilities, and sufficient attention to children to reach certain stages (3). The results of Kurniawan's 2024 study entitled "The Relationship between Family Support and Tawakal with Anxiety Levels in Kidney Failure Patients Undergoing Hemodialysis Therapy." Shows that individuals who face problems will feel more helped when there is a family support figure, especially a mother, who is willing to listen and pay attention to the problems faced by the child. Researchers argue that strong family support plays an important role in reducing patient anxiety levels. When someone faces a health problem, the family, as the closest people, is expected to be good listeners and pay full attention to the difficulties experienced (4).

From the initial survey conducted at RSUP Haji Adam Malik Medan, the incidence of chronic kidney failure in children with inpatient and outpatient care was 73 children suffering from chronic kidney failure in 2024. In 2023, the number of children suffering from chronic kidney failure was 33 inpatients and 36 outpatients. Chronic kidney failure patients, then, in 2022, obtained 33 inpatients and 38 outpatients (5).

Hemodialysis is a procedure often performed on patients with chronic kidney disease (CKD), which causes anxiety. The level of anxiety is determined by various factors, including age, knowledge, environment, length of hemodialysis, and family support. The level of anxiety is determined by various factors, including age, knowledge, environment, length of hemodialysis, and family support. Knowledge and family support influence patient anxiety with p-values of 0.026 and 0.000, respectively. The level of information and family support influences the anxiety of patients undergoing hemodialysis in patients with kidney failure (6). Based on the results of research (7) related to the level of stress, anxiety, and perceived social support among hemodialysis patients with chronic kidney

disease in India. The results of the study showed severe levels of stress and anxiety, and moderate levels of perceived social support in hemodialysis patients. Family support is a crucial factor in maintaining psychological well-being during hemodialysis. Family support and depression in patients with kidney failure are crucial in improving patient comfort. Positive family education can minimize anxiety in patients with kidney failure (8).

Results of interviews with 10 respondents, namely mothers and fathers who had children suffering from chronic kidney failure. It was found that 5 mothers said that their children experienced severe anxiety when the child underwent treatment and control. Then 3 children experienced moderate anxiety because their activities were limited and the food consumed was no longer careless. 2 children experienced mild anxiety because the children sometimes felt afraid of medical procedures and were happy with the games provided by the hospital. Based on the description of the background above, the researcher is interested in researching on "The Relationship between Family Support and the Level of Anxiety of Children with Chronic Kidney Failure Aged 5-18 Years at "Haji Adam Malik General Hospital Medan in 2025". That the purpose of the study is to identify the relationship between the relationship between Family Support and the level of anxiety in children with kidney failure aged 5-18 years at Haji Adam Malik General Hospital, Medan 2025

## **METHODS**

This research method was quantitative with correlation analysis. A cross-sectional approach was used. This study aimed to determine the relationship between maternal role and anxiety levels in children with chronic kidney failure aged 5-18 years at Haji Adam Malik General Hospital, Medan, in 2025. This study was conducted at Haji Adam Malik General Hospital, Medan, from September to February 2025. The population of this study was all 73 inpatients and outpatients diagnosed with chronic kidney failure at Haji Adam Malik General Hospital, Medan.

The sampling technique used was total sampling, a sampling technique in which the sample size is equal to the population. The sample at Haji Adam Malik General Hospital, Medan, consisted of a portion of inpatients and outpatients. The total sample size was 73 patients. To measure anxiety levels, a questionnaire previously used by researchers was used. The questionnaire used to assess anxiety levels in children is the Zung-Self Rating Anxiety Scale (ZSAS), a standardized questionnaire consisting of 20 questions on a Likert

scale. Fifteen questions were aimed at increasing anxiety, and five questions aimed to decrease anxiety. The questionnaire was designed with four categories: always = 4, often = 3, sometimes = 2, and never = 1. A score of 20-34 indicates no anxiety or normal, a score of 35-49 indicates mild anxiety, a score of 50-64 indicates moderate anxiety, and a score of 65-80 indicates severe anxiety.

The level of family support was measured using a questionnaire used by previous researchers. The family support questionnaire for children consists of 20 Likert-type questions. The questionnaire was designed with three categories: always = 3, often = 2, and never = 1. The total score for the family support questionnaire is 20. A score of 20-33 indicates good family support, a score of 34-46 indicates adequate family support, and a score of 47-60 indicates insufficient family support.

The data collection tool used to measure anxiety in children with chronic kidney failure was a questionnaire obtained from the researcher (9), with results of normal, mild, moderate, and severe measurements. Validity and reliability tests were conducted, with a Cronbach's alpha value of 0.85. The data collection tool used to measure the relationship between family support and anxiety levels in children with chronic kidney failure was a questionnaire obtained from the researcher (10).

The results were Always, Often, and Never. Validity and reliability tests were conducted. Based on calculations, 20 of the 20 family support questions were declared valid. The questions were declared valid because the calculated  $r$  value was 0.855 and reliable based on the Cronbach's alpha value (0.855). Therefore, the 20-question family support questionnaire was declared valid and reliable. Data Processing: Editing, Entry, Coding, Tabulating, and Scoring. In this study, the data used for univariate analysis included: characteristics consisting of age, number of children, gender, history of inpatient and outpatient care at Haji Adam Malik General Hospital, Medan, in 2024.

After obtaining research ethics permission from Haji Adam Malik General Hospital, Medan, the researcher conducted a research ethics review with the Ethics Commission under Ethical Exemption No. 3212/F/KEP/USM/XI/2024. The bivariate analysis in this study used the Spearman test, which indicated a correlation with a value of  $\alpha \leq 0.05$ . Bivariate analysis demonstrates the relationship between one independent variable and one dependent variable. This study used a significance level of 0.05. Significance is declared if the P-value is  $<0.05$  and insignificant if the P-value is  $>0.05$ . The statistical test used was the Spearman test with an  $r$  value of 421.

## RESULTS

### 1. Respondent Characteristics

From the results of the study conducted on 73 respondents at RSUP H. Adam Malik, the distribution of respondent characteristics is shown in Table 1.

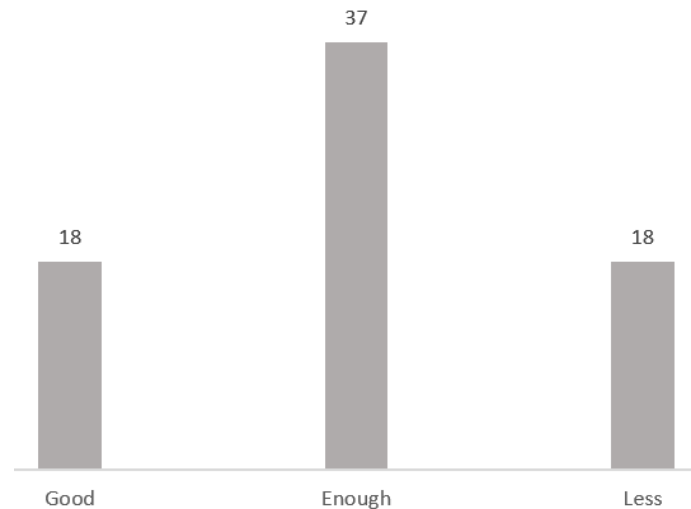
**Table 1.** Characteristics (n=73)

Characteristics	n	%
<b>Child Gender :</b>		
Male	58	79.5
Female	15	20.5
<b>Child Age</b>		
5-10 years	32	43,8
11-18 years	41	56,2
<b>Children's Education</b>		
Elementary School	52	71.2
Junior high school	14	19.2
Senior high school	7	9.6
<b>Age of Parents</b>		
30-40 years	15	20.5
41-65 years	58	79.5
<b>Parents' job</b>		
Not Working	32	43.8
Self-Employed	6	8.3
Civil Servant	9	12.3
Trader	14	19.2
Farmer	12	16.4
<b>Pendidikan Orang Tua</b>		
Elementary School	-	
Junior High School	15	20,5
Senior High School	54	73.9
College	4	5,6

Based on table 1. shows the characteristics of children with chronic kidney failure, the gender of the child is mostly male as many as 58 people (79.5%), the age of the child is mostly 11-18 years as many as 41 people (56.2%), the education of the majority of children is elementary school as many as 52 people (71.2%), the age of the parents is mostly 41-65 years as many as 58 people (79.5%), the occupation of the parents is mostly unemployed as many as 32 people (43.8%), the education of the parents is mostly high school as many as 54 people (73.9%).

### 2. Family Support

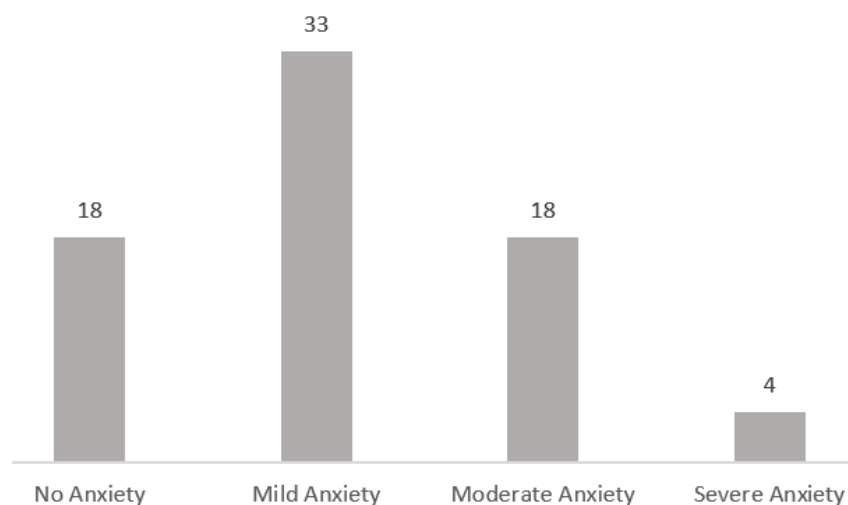
**Table 2. Frequency Distribution and Presentation based on Family Support at Haji. Adam Malik General Hospital (n=73)**



Based on Table 4.2 it shows that the majority of family support is sufficient, with as many as 37 people (50.6%).

### 3. Anxiety Level

**Table 3. Frequency Distribution and Presentation based on Respondents Anxiety at Haji. Adam Malik General Hospital (n=73)**



Based on Table 4.3, the majority of anxiety is mild anxiety, with as many as 33 people (45.1%).

### 4. Bivariate Analysis

**Table 4. Cross Tabulation of Relationship between Family Support and Anxiety Level of Children with Kidney Failure Aged 5-18 Years at Haji Adam Malik General Hospital Medan (n=73)**

Family Support	Anxiety Levels in Children with Chronic Kidney Failure										<i>P</i>	<i>r</i>
	No Anxiety		Light		Moderate		Severe		Total			
	N	%	N	%	n	%	n	%	n	%		
											0.000	.421

Good	10	13.7	6	8.2	2	2.7	0	0	18	24.7
Enough	5	6.8	22	30,1	10	13.7	0	0	37	50.6
Less	3	4.2	5	6.8	6	8.2	4	5.5	18	24.7
Quantity	18	24.7	33	45,1	18	24.7	4	5,5	73	100.0

Based on Table 4. It can be seen that 18 people (24.7%) have good family support with anxiety in children, 10 people (13.7%) are in the category of not anxious, 6 people (8.2%) in the category of mild anxiety, 2 people (2.7%) in the category of moderate anxiety. Of the 37 people (50.6%) who have sufficient family support with anxiety in children, 5 people (6.8%) are in the category of not anxious, 22 people (30.1%), in the category of moderate anxiety, and 10 people (13.7%). Of the 18 people (24.7%) who have less family support with anxiety in children, 3 people (4.2%), in the category of mild anxiety, 5 people

The results of statistical tests using Spearman's rho between the Relationship of Family Support with the Level of Anxiety in Children with Kidney Failure Aged 5-18 Years at RSUP Haji Adam Malik Medan found that there was a significant relationship with a p value = 0.000 with an r value = .421

## DISCUSSION

### a. Family Support for Children with Kidney Failure Aged 5-18 Years at Haji Adam Malik General Hospital Medan

Family support is closely related to supporting a person's quality of life. This is because quality of life is a perception that is present in the abilities, limitations, symptoms, and psychosocial characteristics of an individual's life, both in the cultural environment and its values in carrying out its roles and functions as it should (11).

Based on research, family support is also influenced by the age of the parents, the majority of whom are 41-65 years old, as many as 58 people (79.5%), the majority of parents' jobs are unemployed, as many as 32 people (43.8%) From the results of research conducted by (12) It can be seen that several factors influence family support, namely work, parental income and relationships with patients. Work can affect support if work with higher income can provide the best treatment and treatment in the best hospital. Based on the researcher's opinion, it was found that sufficient family support can help children face the treatment process more optimistically, while a lack of support can contribute to increased anxiety in children.

**b. Anxiety in Children with Kidney Failure Aged 5-18 Years at Haji Adam Malik General Hospital, Medan**

These results indicate that most children with chronic kidney failure still experience anxiety at various levels, most of whom are at mild anxiety levels. This is likely due to the treatment process that must be undergone routinely, medical procedures that may cause discomfort, and activities and eating patterns that must be applied in everyday life.

This varying level of anxiety is in line with research stating that children who undergo long-term medical care tend to experience anxiety due to fear of medical procedures, lifestyle changes, and being contacted about their health conditions (13). However, there were 18 children (24.7%) who experienced moderate anxiety, where symptoms could include more pronounced emotional tension, difficulty concentrating, and increased heart rate. In addition, 4 children (5.5%) experienced severe anxiety, which was characterized by more intense fear, difficulty interacting with the surrounding environment, and the possibility of experiencing sleep and appetite disorders.

Based on the opinion of this study, it can be concluded that although most children experience mild anxiety, more attention is still needed, especially for those in the moderate and severe anxiety categories. Therefore, psychological intervention and appropriate coping strategies are needed, such as family support, education about the medical procedures to be undergone, and play therapy to reduce children's emotional tension. Hospitals also need to increase the role of medical personnel in providing psychosocial support for children who experience high anxiety so that they can undergo treatment more comfortably and minimize stress.

**c. Relationship between Family Support and Anxiety Levels in Children with Kidney Failure Aged 5-18 Years at Haji Adam Malik General Hospital, Medan**

Based on the results of the study, it can be seen that family support plays an important role in the level of anxiety experienced by children. Of the 18 people (24.7%) who received good family support, most children were in the non-anxious category, namely 10 people (13.7%), while 6 people (8.2%) experienced mild anxiety, and only 2 people (2.7%) experienced moderate anxiety. This shows that strong family support can provide a sense of security and comfort for children, so that they are better able to manage their emotions well. In the group with sufficient family support, which



amounted to 37 people (50.7%), the results showed that only 5 people (6.8%) children did not experience anxiety, while 22 people (30.1%) experienced mild anxiety, and 10 people (13.7%) experienced moderate anxiety. These findings indicate that although family support still exists, it is not fully optimal in helping children overcome their anxiety. In the group with less family support, consisting of 18 people (24.7%), the number of children who did not experience anxiety decreased, which was only 3 people (4.1%). As many as 5 people experienced mild anxiety, and some others were likely to experience higher anxiety. Lack of family support can make children feel less cared for, have no place to share their feelings, and experience greater pressure in dealing with everyday situations.

The results of statistical tests using Spearman's rho between the Relationship between Family Support and the Level of Anxiety of Children with Kidney Failure Aged 5-18 Years at RSUP Haji Adam Malik Medan showed that there was a significant relationship with a p value = 0.000 with an r value = .421. This shows that the presence of family in supporting children during the treatment process can help reduce their natural fear and anxiety. Conversely, in the group that received less family support, more children experienced moderate to severe anxiety, and there were even four children who experienced anxiety.

Optimal family support is not only in the form of physical assistance but also includes emotional, informational, and instrumental support. The presence of parents or closest family can provide a sense of security and confidence to children so that they are better prepared to face the treatment process. Conversely, lack of family support can make children feel lonely, anxious, and afraid of the medical procedures that must be undergone (14). In addition to family support factors, children's anxiety levels can also be influenced by socioeconomic factors. Based on the results of this study, most parents whose children undergo chronic kidney failure treatment are in the 41-65 year age group, and most of them do not work. This can be one of the reasons why there are still families who provide less support, due to economic and time constraints to fully accompany their children during the treatment process (15).

This is similar to the research of (13) which showed that good family support was 66 (63.6%) and poor family support was 24 (36.4%) and normal anxiety levels were 16 (24.2%), mild 35 (53.0%) and moderate anxiety levels were 15 (22.7%). Bivariate analysis using the chi-square test. Found a relationship between family support and

anxiety levels in the elderly in Panyusuhan Village, Sukaluyu District, Cianjur Regency.

## CONCLUSION

1. Family Support for Children with Chronic Kidney Failure Aged 5-18 Years at Haji Adam Malik General Hospital, Medan, the Majority is Sufficient, 37 People (50.6%).
2. The Anxiety Level of Children with Chronic Kidney Failure Aged 5-18 Years at Haji Adam Malik General Hospital, Medan, the Majority is Mild Anxiety, 33 People (45.2%).
3. The results of this study indicate that there is a significant relationship between family support and the level of anxiety in children with chronic kidney failure aged 5-18 years at Haji Adam Malik General Hospital, Medan,  $p \text{ value} = 0.000 < 0.005$ , in other words, optimal family support can create comfort in children so that their quality of life improves.

## LIMITATION

The limitations in this study were in the form of difficulties in filling out the questionnaire, namely due to the unstable health condition of the children. Implications of this research. It is hoped that families will increase family support in reducing anxiety in children by providing religious education to children, and always accompanying children in the treatment of chronic kidney failure.

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