

The Effect of Individual Coping and Family Support in Reducing the Anxiety Level of Hemodialysis Patients at Imelda General Hospital Indonesia

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ABSTRACT

Chronic renal failure (CRF) is a condition of kidney function that decreases gradually due to kidney damage. Patients undergoing hemodialysis therapy will face problems arising from malfunctioning of the kidneys. Coping mechanism is one way to adapt to stress. Family support is an attitude, action, acceptance of the family and ready to provide help and assistance to one of the families who is sick or needs help and causes a sense of love and affection. The purpose of the study was to determine the effect of individual coping and family support in reducing the anxiety level of hemodialysis patients at Imelda General Hospital Indonesia in 2023. This type of research is quantitative research. The study was conducted at Imelda Indonesia Hospital Medan in August 2023. The study population was 104 hemodialysis patients, the study sample was 52 people with purposive sampling. Bivariate Analysis with Chi Square test. The results of the study The age of the majority of hemodialysis respondents aged 46-55 years (Early Elderly) as many as 26 people (50.0%), the majority sex is male as many as 28 people (53.8%), Long time undergoing hemodialysis the majority of 1-3 years as many as 30 people (57.7%), Adaptive coping (62-100) as many as 49 people (94.2%), Good family support (36-48) as many as 50 people (96.2%), Mild anxiety levels (20-39) as many as 42 respondents (80.8%), Adaptive coping individuals (62-100) had an effect with mild anxiety levels (20-39) as many as 40 people with P Value values of 0.035<0.05. Good family support (36-48) had an effect with mild anxiety levels (20-39) as many as 42 people with P Value 0.013<0.05.

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INTRODUCTION

Chronic kidney failure (CRF) is a condition of kidney function that gradually decreases due to kidney damage. The function of the kidneys is to filter waste and excess fluid in the blood before being removed through urine which every day the kidneys filter as much as 120-150 liters of blood and produce as much as 1-2 liters of urine (Fraser & Blakeman, 2016). The hemodialysis process requires the installation of a Fistula Vein Artery device to gain vascular access that will be connected to a hemodialysis machine (Pranowo, 2018).

Patients undergoing hemodialysis therapy will face problems arising from malfunctioning of the kidneys. This has an impact on the patient's life which includes biological, social, psychosocial (Canisti, 2008). Patients with chronic kidney failure will often feel stressed and experience anxiety because hemodialysis patients must restrict diet and fluids (Son et al, 2009) and require coping mechanisms and family support.

The coping mechanism is one way to adapt to stress (Saam & Wahyuni in Taluta, Mulyadi & Hamel, 2014). A person can overcome stress and anxiety by mobilizing coping resources in the environment in the form of economic capital, problem-solving abilities, social support and cultural beliefs (Stuart in Taluta, Mulyadi & Hamel, 2014). The phenomenon that occurs in patients who undergo routine hemodialysis treatment or therapy, most patients feel anxiety because the dialysis process is long and long, so patients need an effective problem-solving or coping mechanism to be able to reduce or overcome anxiety.

The level of anxiety is influenced by several factors, both biological factors, which are sourced or determined by congenital and physiological factors, namely those that affect or manifest in physical symptoms, especially in the function of the central nervous system, both from within the patient and from outside the patient, acceptance of the implementation of hemodialysis, socioeconomic, age of the patient, patient's condition, duration and frequency of undergoing hemodialysis arise due to threats from the patient so as to cause psychological responses and Patient behavior can be observed, while self-threat in hemodialysis patients can come from human responses (nurses), human interaction and the environment exposed by the tools used. Patients who experience long-term dialysis will feel worried about their pain conditions that cannot be predicted and have an effect on lifestyle (Rahman, Heldawati & Sudirman, 2014).

According to Stuart (2016) anxiety is a vague and diffuse form of worry associated with feelings of uncertainty and helplessness. This emotional state has no specific object. Anxiety is experienced subjectively and communicated interpersonally. Symptoms of anxiety can be feelings of irrational worry / fear of events that will occur, difficulty sleeping, tension and irritability, often complain of mild symptoms or fear and worry about severe illness and often imagine scary things / panic about big problems (Setyawan, 2017).

Comparison of anxiety levels in patients with stage 3, 4 and 5 CRF who did not do hemodialysis as much as 68% with stage 5 CRF patients who underwent hemodialysis as much as 70.4% (Shafi ST and Shafi T, 2017). The percentage of stage 5 CRF patients who showed signs of anxiety was 53% (Feroze et al, 2012). While the percentage of anxiety level of patients undergoing hemodialysis found that 57.5% of patients were at moderate anxiety levels, followed by 25.8% mild anxiety levels and 22.5% severe anxiety levels (Jangkup et al, 2015). The literature shows an increased level of anxiety in patients suffering from CKD. The prevalence rate of anxiety in patients with ESRD is estimated to be about 12% to 52%. Studies using SCID to diagnose anxiety disorders have found prevalence rates ranging from 0% to 45.7%.

Family support is an attitude, action, family acceptance and ready to provide help and assistance to one of the families who is sick or needs help and causes a sense of love and affection (Ayuni, 2020). Family support given to other family members in the form of goods, services, information, and advice that can make the recipient of support will feel loved, appreciated, and at ease. Family support is also very influential for patients who are undergoing treatment, because the family support obtained gives a positive response to patients to reduce the anxiety felt. An effort to reduce the anxiety of patients with chronic renal failure undergoing hemodialysis therapy is family support, because family support is very important for the patient's recovery.

METHOD

This research is a quantitative research with *Cross Sectional approach*. The research will be conducted at Imelda Hospital Indonesia in August 2023. Based on the results of the data obtained, the number of hemodialysis patients at Imelda Hospital Indonesia is 104 people. Sampling technique using *Purposive Sampling* The number of research samples was 52 people who came to the hemodialysis room of Imelda Hospital Indonesia. Bivariate analysis using *Chi Square Test* assisted by *SPSS 22* software.

RESULTS AND DISCUSSION

Univariate Result

Frequency Distribution of Respondent Characteristics

Table 1. Frequency Distribution of Hemodialysis Characteristics Undergoing Hemodialysis at Imelda Indonesia General Hospital Medan

Data	n	%
Age		
Early Adult (26-35 Years)	2	3,8

Late Adult (36-45 Years)	11	21,2
Early Elderly (46-55 years)	26	50,0
Late Elderly (56-65 Years)	13	25,0
Total	52	100
Gender		
Man	28	53,8
Woman	24	46,2
Total	52	100
Long Hemodialysis		
<1 Year	1	1,9
1-3 Years	30	57,7
>3 Years	21	40,4
Total	52	100

Based on the results of the study, it was described that the age of hemodialysis respondents was mostly aged 46-55 years (Early Elderly) as many as 26 people (50.0%), followed by ages 56-65 years (Late Elderly), ages 36-45 years (Late Adulthood), ages 26-35 years (Early Adulthood).

Based on gender, it was found that the majority of hemodialysis respondents were male as many as 28 people (53.8%), followed by female sex as many as 24 people (46.2%). Based on the length of undergoing hemodialysis, it was found that the majority of hemodialysis respondents were 1-3 years as many as 30 people (57.7%), followed by the length of undergoing hemodialysis >3 years as many as 21 people (40.4%) and under 1 year as many as 1 person (1.9%).

Frequency Distribution Based on Research Variables

Table 2. Frequency Distribution Based on Research Variables

Data	n	%
Koping Mechanism		
Adaptive Sickness (25-61)	3	5,8
Adaptive (62-100)	49	94,2
Total	52	100
Family Support		
Good (36-48)	50	96,2
Good enough (31-35)	1	1,9
Less Good (12-30)	1	1,9
Total	52	100
Anxiety Level		
Mild Anxiety (20-39)	42	80,8
Emergency In (40-59)	10	19,2
Total	52	100

Based on table 2, it was found that of 52 hemodialysis respondents, the majority had adaptive coping mechanisms (62-100) as many as 49 people (94.2%), followed by respondents with adaptive mal coping mechanisms (25-61) as many as 3 people (5.8%). Based on family support, it was found that the majority of hemodialysis patients felt good family support (36-48) as many as 50 people (96.2%), followed by good family support (31-35) and poor family support (12-30) as many as 1 person each (1.9%). Based on the level of anxiety, data were obtained that the majority of hemodialysis respondents had mild anxiety levels (20-39) as many as 42 respondents (80.8%) and respondents with moderate anxiety categories (40-59) as many as 10 people (19.2%).

Bivariate Results

Effect of coping ability of individuals with anxiety levels in hemodialysis patients

Table 3. Effect of coping ability of individuals with anxiety levels in hemodialysis patients

		Anxiety Level			P-Value
		Light (20-39)	Keep (40-59)	Total	
Individual Koping	Adaptive Sickness (25-61)	2	1	3	0,035
	Adaptive (62-100)	40	9	49	
	Total	42	10	52	

Based on table 3, it was found that the coping of adaptive individuals (62-100) had an effect with mild anxiety levels (20-39) as many as 40 people with *P Value* values of $0.035 < 0.05$.

The Effect of Family Support on the Anxiety Level of Hemodialysis Respondents

Table 4. Effect of family support ability on anxiety levels in hemodialysis patients

		Anxiety Level			P-Value
		Light (20-39)	Medium (40-59)	Total	
Family Support	Good (36-48)	42	8	50	0,013
	Good enough (31-35)	0	1	1	
	Less Good (12-30)	0	1	1	
	Total	42	10	52	

Berdasarkan tabel 4 didapatkan hasil bahwa dukungan keluarga baik (36-48) berpengaruh dengan tingkat kecemasan ringan (20-39) sebanyak 42 orang dengan nilai *P Value* $0,013 < 0,05$.

DISCUSSION

Characteristics of Hemodialysis Patients at Imelda General Hospital Indonesia

The results of the study found that the age of hemodialysis respondents was mostly aged 46-55 years (Early Elderly) as many as 26 people (50.0%), followed by ages 56-65 years (Late Elderly), ages 36-45 years (Late Adults), ages 26-35 years (Early Adults). The results of Mustafa's research, (2019) showed that of the 40 respondents, the productive age group had the highest number of respondents, namely 36 respondents (90%). This illustrates that respondents of productive age are more than respondents of non-productive age, which is as many as 4 respondents (10%).

Gender was found that the majority of hemodialysis respondents were male as many as 28 people (53.8%), followed by female sex as many as 24 people (46.2%). The results of Mustafa's research, (2019) showed that of the 40 respondents, the male respondent group had the highest number of respondents, namely 23 respondents (57.5%). This illustrates that there are more male respondents than female respondents, which is as many as 17 respondents (42.5%).

The duration of undergoing hemodialysis found that the majority of hemodialysis respondents were 1-3 years as many as 30 people (57.7%), followed by the length of undergoing hemodialysis >3 years as many as 21 people (40.4%) and under 1 year as many as 1 person (1.9%).

Individual coping rate of hemodialysis patients at Imelda General Hospital Indonesia

The results of the study found that adaptive coping mechanisms (62-100) were 49 people (94.2%), followed by respondents with adaptive mal coping mechanisms (25-61) as many as 3 people (5.8%). Effective coping occupies a central place in the health of the body and the body's rejection power against interference and attacks of a disease and the body's rejection power against

interference or attack of a disease both physical and psychological, social, spiritual (Nursalam, 2007 in Indah, 2016).

If the coping mechanism chosen is successful, then the individual will be able to adapt to the changes that occur. the coping mechanism can be learned, from the beginning of the onset of the stressor. An individual's coping ability depends on temperament, perception, and cognition as well as the cultural background or norms in which he grew up.

Family Support of Hemodialysis Patients at Imelda General Hospital Indonesia

The results showed that good family support (36-48) was 50 people (96.2%), followed by good family support (31-35) and poor family support (12-30) each as many as 1 person (1.9%). The support possessed by someone can prevent the development of problems due to the pressure faced. Someone with high support will be more successful in facing and overcoming problems than those who do not have support (Setiadi, 2008).

This study is supported by research conducted by Rini (2013) entitled the relationship of family support to the compliance of chronic kidney failure patients undergoing hemodialysis. The results showed that social support has a significant relationship with compliance behavior. Another study conducted by Sari (2009) showed that there was a significant relationship between family support and patient compliance in undergoing hemodialysis.

Anxiety Level of Hemodialysis Patients at Imelda General Hospital Indonesia

The results showed that the level of mild anxiety (20-39) was 42 respondents (80.8%) and respondents with moderate anxiety category (40-59) as many as 10 people (19.2%). The results of Mustafa's research, (2019) showed that out of 40 respondents, the group that experienced moderate anxiety had the highest number of respondents, namely 16 respondents (40.0%). This shows that the moderately anxious group is more than the mild anxious group as many as 15 respondents (37.5%) and severe anxiety as many as 9 respondents (22.5%).

According to Putri (2016), anxiety or anxiety is closely related to feelings of uncertainty and helplessness. This state has no specific object. Conditions are subjectively experienced and communicated in interpersonal relationships. Anxiety is an individual's response to an unpleasant situation and is experienced by all living things in everyday life. Anxiety is different from fear, the characteristic of fear is that uncertainty can cause anxiety that manifests in anxiety, insecurity, worry that arises because it is felt that it will experience events that are not exciting. Anxiety arises because of a response to stressful conditions or conflict.

The Effect of Individual Coping and Family Support in Reducing the Anxiety Level of Hemodialysis Patients at Imelda General Hospital Indonesia

The results showed that the coping of adaptive individuals (62-100) had an effect with mild anxiety levels (20-39) as many as 40 people with *P Value* values of $0.035 < 0.05$. Good family support (36-48) had an effect with mild anxiety levels (20-39) as many as 42 people with *P Value* $0.013 < 0.05$.

Coping mechanisms are ways used by individuals in solving problems, overcoming changes that occur and threatening situations both cognitive and behavioral (Nasir and Muhith, 2011). Stuart (2012) states that coping mechanisms are divided into 2, namely adaptive and maladaptive coping mechanisms. Adaptive coping mechanisms are coping mechanisms that support growth, learning and achieving goals. While maladaptive coping mechanisms are coping mechanisms that inhibit growth, and tend to dominate the environment.

The results of Sartika's study, (2018) showed that almost half of respondents whose coping mechanisms were adaptive, had a mild level of anxiety of 13 respondents with a percentage (36.1%). The results of the *spearman rank* statistical test obtained a significant number or *probability number* (0.000) much lower than a significant standard of 0.05 or ($p < \alpha$), then the H_0 data was rejected and

H1 was accepted which means there is a relationship between coping mechanisms and anxiety levels in chronic kidney failure patients undergoing hemodialysis at Bangil Hospital.

According to researchers, chronic kidney failure patients who use adaptive coping mechanisms are more likely to experience mild anxiety. In contrast, chronic renal failure patients who use maladaptive coping mechanisms are more likely to experience moderate and severe anxiety. This can be seen in the results of the study, namely the use of coping resources such as social support and individual belief values helps individuals develop adaptive coping so that the anxiety felt by individuals tends to be mild and moderate, and vice versa.

The results of this study are in line with Romani's research (2012) which states that there is a significant relationship between individual coping mechanisms and anxiety levels of chronic kidney failure patients in the Hemodialysis Unit of Dr. Soeradji Tirtonegoro Klaten Hospital. According to Salmawati (2013) anxiety also has an impact on the patient's physical state, where the body will feel bad as a result of increased secretion of adrenaline and non-adrenaline hormones. As a result, the body will feel pain and spasm in the muscles, especially in the muscles of the neck, chest and back.

CONCLUSION

The age of hemodialysis respondents was mostly aged 46-55 years (Early Elderly) as many as 26 people (50.0%), followed by ages 56-65 years (Late Elderly), ages 36-45 years (Late Adults), ages 26-35 years (Early Adults). Gender was found that the majority of hemodialysis respondents were male as many as 28 people (53.8%), followed by female sex as many as 24 people (46.2%). The duration of undergoing hemodialysis found that the majority of hemodialysis respondents were 1-3 years as many as 30 people (57.7%), followed by the length of undergoing hemodialysis >3 years as many as 21 people (40.4%) and under 1 year as many as 1 person (1.9%). Adaptive coping (62-100) was 49 people (94.2%), followed by respondents with adaptive mal coping mechanisms (25-61) as many as 3 people (5.8%). Good family support (36-48) as many as 50 people (96.2%), followed by good family support (31-35) and poor family support (12-30) as many as 1 person each (1.9%). Mild anxiety levels (20-39) were 42 respondents (80.8%) and respondents with moderate anxiety category (40-59) were 10 people (19.2%). Coping adaptive individuals (62-100) had an effect with mild anxiety levels (20-39) as many as 40 people with *P Value* values of $0.035 < 0.05$. Good family support (36-48) had an effect with mild anxiety levels (20-39) as many as 42 people with *P Value* $0.013 < 0.05$.

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