

The Psychological Disorders with Coping Mechanisms in Patients Chronic Renal Failure Who Undergoing Hemodialysis at PKU Muhammadiyah Gombong Hospital

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Abstract. Chronic renal failure is a kidney disease. Information concerning the relationship between psychological disorders and coping mechanisms in patients with kidney failure suffering from PKU Muhammadiyah Gombong Hospital. This research is a descriptive cross-sectional correlation study. The study was conducted on chronic patients with kidney failure who had hemodialysis in PKU Muhammadiyah Gombong Hospital. The sampling technique was simple random sampling in 75 people. The Research instruments used the Hospital Anxiety and Depression questioner, the Depression Anxiety and Stress Scale questionnaires and Coping Mechanism questionnaires. The results in this research of psychological anxiety disorder mostly experienced mild anxiety as many as 36 people (48.0%), the depressive disorder the most did not experience depression or normal depression as many as 37 people (49.3%), in the psychological stress disorder were experienced stress or normal stress as many as 35 people (46.7%) and the coping mechanism experienced the most adaptive coping mechanism level as many as 61 people (81.3%). This study indicates a relationship between psychological disorders and coping mechanisms in chronic renal failure patients who underwent hemodialysis ($p\text{-value} = 0.037 < 0.05$). The results of this study are recommended for the administration of action for chronic renal failure patients who are undergoing hemodialysis therapy.

Keywords: Anxiety, depression, stress, coping mechanism, hemodialysis

1 Introduction

Chronic kidney disease is one of the world's high-financing health problems. Uremia discovery in the blood is one of the signs and symptoms of kidney disease. Uremia is the result of the inability of the body to maintain fluid and electrolyte metabolism and balance because of its progressive and irreversible impaired renal function [6]. Prevalence in the research of Kosasih, et al [7] states that the growth in the number of people with kidney failure in 2014 was 50% from the previous year, the world population of chronic kidney disease ranks 18th on the list of diseases that cause world death, more than 1.5 million people all over the world receiving treatment with dialysis.

According to the 2018 Basic Health Research results, chronic renal disease was diagnosed in Indonesians 15 years of age and reached 0.38 percent. In Indonesia, chronic kidney failure patients with hemodialysis showed a 19,3 percent increase in 2018 and hemodialysis patients increased by 0,42 percent in central Java compared with the previous year. Data from the

Indonesian Renal Registry [3] in 2018 indicated that 81.7% of patients with stage V chronic kidney illness, or stage V Chronic kidney disease, were diagnosed as main disease patients with hemodialysis in Indonesia in 2018, followed by 6%, namely acute renal failure/ARF.

To maintain the survival of patients with chronic renal failure, one of them is undergoing hemodialysis. Hemodialysis is to reduce levels of urea, creatinine and other toxic substances in the blood [8]. Patients undergoing hemodialysis therapy feel some discomfort. There is resistance to the condition, which results in conflict in the patient, usually caused by a situational crisis of death threats, and not knowing the end result of this therapy [18].

The psychological condition of patients with kidney failure will greatly affect the course of the disease and the patient's physical condition. According to Novitasari & Hidayati [9], there are several changes in psychological disorders that arise from kidney failure patients, namely anxiety, stress, and depression.

Patients with chronic renal failure need throughout their life to undergo regular hemodialysis therapy, every week for two sessions. This condition causes deep psychological disturbances. The psychological disorders experienced by patients with chronic kidney failure can affect their coping mechanisms.

The coping mechanism is one way to adapt to patients' problems by mobilizing sources of coping in the environment in the form of economic capital, problem-solving abilities, social support, and cultural beliefs [15]. The coping mechanisms shown by individuals can be adaptive or maladaptive.

Based on a preliminary study at PKU Muhammadiyah Gombong Hospital on February 3, 2020, 295 patients underwent hemodialysis. The results of the distribution of the HADS (Hospital Anxiety Depression) questionnaire from 5 people, 3 of whom experienced mild anxiety and 2 others did not experience anxiety, 2 people were not depressed, 2 experienced mild depressions and 1 experienced severe depression. Whereas for stress using the DASS 42 questionnaire (depression, anxiety, and stress) 4 experienced mild stress and 1 was not stressed. For coping mechanisms, 2 of them are less adaptive and 3 are adaptive.

Based on the above problems the problem can be formulated in the research: "Is there any relationship between psychological disorders or coping mechanisms in the PKU Muhammadiyah Gombong Hospital in kidney failure patients undergoing hemodialysis?"

This study aimed to provide information on the relationship between psychological disorders and coping mechanism of kidney failure patients in PKU Muhammadiyah Gombong Hospital with hemodialysis.

The benefits of this research can be used as an information source to provide comprehensive care in handling chronic psychological problems.

2 Method

The chosen research design was a quantitative research design with a cross-sectional approach to correlation research. Data were collected using the HADS (Hospital Anxiety and Depression) questionnaire, DASS 14 (depression, anxiety, and stress scale), and the Coping Mechanism questionnaire. The research results are presented in a correlative manner. This research was conducted in the Hemodialysis room at PKU Muhammadiyah Gombong Hospital. This research was conducted on 9 May 2020 to 15 June 2020. The population in this study was 295 patients at PKU Muhammadiyah Gombong Hospital. Samples were taken as many as 75 people with random sampling.

The inclusion criteria and exclusion criteria. The inclusion criteria included patients aged > 25 years, patients who could read and write, and patients willing to be respondents. The exclusion criteria included patients with decreased consciousness, patients who could not read and write, and unwilling to become respondents.

3 Result and Discussion

3.1. Forms of psychological disorders in chronic kidney failure patients undergoing hemodialysis at pku muhammadiyah gombong hospital

3.1.1. Anxiety

The result Frequency Distribution of Psychological disorders (ANGESIA) in chronic kidney failure in PKU Muhammadiyah Hospital, describes on Table 1. Patients undergoing hemodialysis.

Table 1. Frequency Distribution of Psychological Disorders (Anxiety) in Chronic Kidney Failure Patients undergoing Hemodialysis at PKU Muhammadiyah Gombong Hospital (N = 75)

No	Anxiety Level	Frequency	Presentation (%)
1.	Normal	30	40.0
2.	Mild Anxiety	36	48.0
3.	Moderate Anxiety	7	9.3
4.	Severe Anxiety	2	2.7
	Total	75	100

Based on table 1. it shows that hemodialysis patients at PKU Muhammadiyah Gombong mostly experienced mild anxiety, namely 36 people (48.0%) and the least was severe anxiety, namely 2 people (2.7%).

3.1.2. Depression

Patients undergoing hemodialysis in the Muhammadiyah Gombong Hospital PKU Frequency Distribution of Psychological Disorders (Depression) in Chronic Kidney Failure, Table 2.

Table 2. Frequency Distribution of Psychological Disorders (Depression) in Chronic Kidney Failure Patients undergoing Hemodialysis at PKU Muhammadiyah Gombong Hospital (N = 75)

No	Depression Level	Frequency	Presentation (%)
1.	Normal	37	49.3
2.	Mild Depression	28	40.0
3.	Moderate Depression	7	9.3
4.	Severe Depression	3	1.3
	Total	75	100

Based on table 2, it shows that hemodialysis patients at PKU Muhammadiyah Gombong mostly did not experience depression or normal, namely 37 people (49.3%), and the least was severe depression, namely 3 people (1.3%).

3.1.3. Stress

Table 3 describes Frequency distribution of psychological disorders (stress) in chronic kidney failure in the PKU Muhammadiyah Gombong hospital.

Table 3. Frequency Distribution of Psychological Disorders (Stress) in Chronic Kidney Failure Patients undergoing Hemodialysis at PKU Muhammadiyah Gombong Hospital (N = 75)

No	Stress Level	Frequency	Presentation (%)
1.	Normal	35	46.7
2.	Mild Stress	29	38.7
3.	Moderate Stress	8	10.7
4.	Severe Stress	3	4.0
5.	very severe stress	0	0
Total		75	100

Based on table 3, it shows that hemodialysis patients at PKU Muhammadiyah Gombong mostly did not experience stress or normal, namely 35 people (46.7%) and the least experienced severe stress (0%).

3.2. Coping mechanism of chronic kidney failure patients underwent hemodialysis at pku muhammadiyah gombong hospital

The coping mechanism in PKU Muhammadiyah Gombong Hospital for chronic kidney failure patients underwent hemodialysis. Table 4 Describes

Table 4. Frequency Distribution of Coping Mechanisms for Chronic Kidney Failure Patients undergoing Hemodialysis at PKU Muhammadiyah Gombong Hospital (N = 75)

No	Coping Mechanism Level	Frequency	Presentation
1.	Adaptive	57	76.0
2.	Less Adaptive	15	20.0
3.	Maladaptive	3	4.0
Total		75	100

Experienced adaptive coping mechanisms, namely 61 people (81.3%) and less adaptive, namely 14 people (18.7%). While patients at the level of maladaptive coping mechanisms, namely 0 people (0%).

3.3. Relationship between psychological disorders and coping mechanisms in chronic kidney failure patients underwent hemodialysis at pku muhammadiyah gombong hospital

Table 5 shows a relationship between psychological disorders and mechanisms of coping for patients suffering from chronic kidney failure at PKU Muhammadiyah Gombong Hospital.

Table 5. Relationship between Psychological Disorders and Coping Mechanisms in Chronic Kidney Failure Patients Underwent Hemodialysis at PKU Muhammadiyah Gombong Hospital (N = 75)

Variable	N	Coefficient Correlation	p-value
Coping Mechanisms	75	0.358	0.037
Physiology Disorder	75		

Based on table 5 it can be seen that there is a relationship between coping mechanisms and psychological disorders in chronic renal failure patients undergoing hemodialysis with a p-value = 0.037 < 0.05 with a correlation value of 0.358 indicating that the strength of the correlation is sufficient (0.26-0.50)

3.4. Discussion

3.4.1. Forms of psychological disorders in patients with chronic kidney failure who underwent hemodialysis at pku muhammadiyah gombong hospital

Due to the results of this study, more psychological disorders with a mild anxiety class were reported in patients with chronic kidney failure with 36 persons (48.0 percent). These results indicate that the patient is not too worried about his condition because most patients get good support from family, relatives and fellow hemodialysis.

This study supported the results of Kamil's research [5], which showed that 183 out of 183 respondents (100%) experienced mild anxiety. The results of another study conducted by Ratnawati [11] showed that mild anxiety was 6 people (40.0%) out of 15 respondents, while moderate anxiety levels were 4 people (26.7%), severe anxiety levels were 3 (20.0%), and normal as many as 2 people (13.3%).

The study results showed that most depressed psychological disorders did not experience depression or were normal as many as 37 people (49.3%). This shows that the patient can accept his condition is undergoing hemodialysis and the patient has resigned to what they are experiencing.

The results of this study are in line with the research of Ruza [13]. which states that of the 30 respondents of chronic kidney failure patients who did not experience depression or normal, 22 (73.33%).

The majority of patients with chronic renal failure in psychological stress disorder were normal stressors or not experiencing stress, as many as 35 people (46.7%). This shows that most patients with kidney failure are accustomed to hemodialysis for a long time. The majority are familiar with the hemodialysis procedure so that stressor control can be handled.

Ardila's research [1] supports the results of this study, 2014 which states that 16 patients do not experience stress or are said to be normal (34.8%) out of 46 people consisting of 14 people with mild stress (30.4%), 14 people with moderate stress (30.4%), and severe stress 2 people (4.3%).

3.4.2. Coping mechanism of chronic kidney failure patients undergoing hemodialysis at PKU Muhammadiyah Gombong hospital

Research results indicated that the coping mechanism in hemodialysis patients was adaptive : 57 people (76.0%), 15 less adaptive people (20.0%) and 3 people with maladaptive diseases (4.0 percent). According to researchers, patients with chronic kidney failure who experience an

adaptive coping mechanism can control their emotions. This shows that many chronic kidney failure patients undergoing hemodialysis can receive support from others [15].

This research is in line with Fay's research [2], out of 36 respondents experienced more adaptive coping mechanisms as many as 28 people (77.8%).

3.4.3. Relationship between psychological disorders and coping mechanisms in chronic kidney failure patients undergoing hemodialysis at pku muhammadiyah gombong hospital

The results for the study on the relation between psychiatric disorders and coping mechanisms in patients undergoing hemodialysis obtained $p\text{-value} = 0.037 < 0.05$, meaning that psychiatric disorders are associated with coping mechanisms in PKU Muhammadiyah Gombong Hospital patients with chronic kidney failure suffering from hemodialysis. Hemodialysis patients experience psychological problems such as anxiety, depression, and stress and physical problems due to their condition. In addition, support from family and people around the limited life expectancy causes patients to have negative feelings, leading to negative coping mechanisms.

Under the above conditions, theory and facts are agreed where the coping mechanism is necessary to resolve a problem. The application of coping mechanisms depends on the past experience of the patient [10]. Most patients with hemodialysis have a coping mechanism that is less adaptive because of fear in itself and inadequate thinking.

In this study supported by Ruza [13], the results were that there was a relationship between coping mechanisms and psychological disorders in the depression category with chi-square analysis, the $p\text{-value}$ was 0.046 (< 0.05). There is a significant relationship between coping mechanisms and depression levels in chronic renal failure patients undergoing hemodialysis.

Another study from Sartika [14] showing a link between coping mechanisms and mental disorders in the anxiety category and the results of a statistical test of the Spearman rank, $p\text{-value} = 0.000 < \alpha (0.05)$. Thus, H_a is accepted, which means that there is an important relation between coping and anxiety in patients undergoing hemodialysis who experience chronic renal failure.

The results of Vani's 2015 research [19] show that Dr M Djamil Padang's research showed a connection between coping mechanisms and psychological disorders within the stress category with the $p\text{-value}$ chi-square statistical test = $0,000 < 0,05$ showed that the coping mechanisms have an important link with the stress levels in the chronic renal failure category.

In the conditions above, it can be concluded that the coping mechanisms that are well utilized can help patients develop adaptive coping mechanisms so that patients can cope with their psychological disorders. The lower the psychological disorder, the better the coping mechanism is carried out.

4 Conclusion

Based on the results of research that researchers have conducted, the following conclusions can be drawn:

- The level of psychological disorders in patients with hemodialysis with chronic renal failure, the majority of anxiety categories experienced mild anxiety as many as 36 people (48.0%),

- 37 people experienced normal depression in the major depression category (49.3%). The majority stress category experienced normal stress as many as 35 people (46.7%).
- The coping mechanism experienced by chronic renal failure patients undergoing hemodialysis had the highest level of the adaptive coping mechanism as many as 57 people (76.0%).
 - A relationship exists between coping mechanisms and psychological disorders in patients suffering from p-value hemodialysis in chronic renal failure = 0.037 <0.05

References

- [1] Ardila, Ina., Sulistyaningsih, D.R. (2014). Hubungan Tingkat Stress dengan Kualitas Hidup Pasien Penyakit Ginjal Kronik yang Menjalani Hemodialisa Di RSUD Kota Semarang. *Jurnal Keperawatan dan Kebidanan* Vol. 1 No. 10
- [2] Fay, S. D., Istichomah. (2016). Hubungan tingkat kecemasan dengan mekanisme koping pada pasien chronic kidney disease yang menjalani hemodialisa di RS Condong Catur Yogyakarta. *Jurnal Kesehatan "Samodra Ilmu"* Vol. 08. No. 01
- [3] Indonesian Renal Registry (IRR). (2018). 11th Report Of Indonesian Renal Registry
- [4] Ipo, Astri., Aryani, Tuti., Suri, Marta. (2016). Hubungan Jenis Kelamin Dan Frekuensi Hemodialisa Dengan Kualitas Hidup Pasien Gagagl Ginjal Kronik yang Menjalani Hemodialisa di RSUD Raden Mattaher Jambi. *Jurnal Akademika Baiturrahim* Vol. 5 No. 2
- [5] Kamil, Insan., Agustina, Rismia., Wahid, Abdurahman. (2018). Gambaran Tingkat Kecemasan Pasien Gagal Ginjal Kronik yang Menjalani Hemodialisa di RSUD Ulin Banjarmasin. *Jurnal Dinamika Kesehatan* Vol. 9 No. 2
- [6] Kemenkes RI. (2018). Cegah dan Kendalikan Penyakit Ginjal dengan Cerdik. Jakarta : Kementrian Kesehatan RI
- [7] Kosasih, E., Astilia., Solehati, Tetti. (2019). Pengaruh Compression Stocking terhadap Obstructive Sleep Apnea (OSA) pada Pasien Hemodialisis. *Jurnal Keperawatan Muhammadiyah*, 4 (1), 2019
- [8] La.musa, Wartilisna., Kundre, R., Babakal, A. (2015). Hubungan Tindakan Hemodialisa Dengan Tingkat Kecemasan Klien Gagal Ginjal Di Ruangand Dahlia RSUP Prof. Dr. R. Kandou Manado. *e-journal Keperawatan (e-Kp)* Volume 3. Nomor 1
- [9] Novitasari, Ida & Hidayati, Wahyu. (2015). Gambaran Tingkat Kecemasan, Stres, Depresi dan Mekanisme Koping Pasien Penyakit Ginjal Kronik yang Menjalani Hemodialisis di RSUD Dr. Moewardi. *e-journal Universitas Diponegoro*
- [10] Rahayu, D.A., Armiyati, Yunie. (2014). Faktor yang Berkolerasi Terhadap Mekanisme Koping Pasien CKD yang Menjalani Hemodialisa. *Jurnal Prosiding Seminar Nasional & Internasional*.
- [11] Ratnawati. (2011). Tingkat kecemasan pasien dengan tindakan heodialisa di BLUD RSU Dr. M.M Dunda kabupaten gorontalo. *Jurnal Health & Sport* Vol. 3 No. 2.
- [12] Riskesdas. (2018). Laporan Nasional Riset Kesehatan Dasar 2018. Jakarta : Kementrian Kesehatan RI
- [13] Ruza, A.F.N., Sugiyanto, E.P., Kandar. (2017). Hubungan Mekanisme Koping dengan Tingkat Depresi pada Pasien Gagal Ginjal Kronik yang Menjalani Hemodialisa di RSUD Dr. H. Soewondo Kendal. *Jurnal Ilmu Keperawatan*
- [14] Sartika, Anggun. (2018). Hubungan Mekanisme Koping dengan Tingkat Kecemasan pada Pasien Gagal Ginjal Kronikk dalam Menjalani Hemodialisa di RSUD Bangil. *Skripsi STIKES Insan Cendekia Medika Jombang*
- [15] Stuart, G.W & Laraia, M.T. (2013). *Principles and Practice of Psychiatric Nursing*. (7 th Ed) St. Louis: Mosby
- [16] Syaiful, H.Q., Qoenzil, Fadil., Afriant, Rudy. (2014). Hubungan Umur dan Lamanya Hemodialisis dengan Status Gizi pada Penderita Penyakit Ginjal Kronik yang menjalani Hemodialisis di RS. Dr. M. Djamil Padang. *Jurnal Kesehatan Andalas*. Vol. 3 No. 3

- [17] Taluta, Yanes, P., Mulyadi., Hamel, R. S. (2014). Hubungan tingkat Kecemasan Dengan Mekanisme Koping pada Penderita Diabetes Melitus Tipe II Di Poliklinik Penyakit Dalam RSUD Tobelo Kabupaten Halmahera Utara. e-Journal Keperawatan (e-Kp) Vol. 2. No. 1
- [18] Tangian, A. F., Kandou, L. F. J., Munayang, H. (2015). Hubungan Lamanya Menjalani Hemodialisis Dengan Tingkat Kecemasan Pada Pasangan Hidup Pasien yang Menderita Penyakit Ginjal Kronik Di RSUP Prof. Dr. R Kandou Manado. Jurnal e-Clinic (ECL) Vol. 3. No. 1
- [19] Vani, Oktafira. (2015). Hubungan Mekanisme Koping dengan Tingkat Stress pada Pasien Chronic Kidney Disease yang Menjalani Hemodialisa Di RSUP DR. M. Djamil Padang. Skripsi Universitas Andalas.