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Differences in Self-Management of Emergency Hemodialysis Patients and Regular Hemodialysis in Chronic Kidney Disease Patients

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Penyakit ginjal kronik (PGK) merupakan gangguan kesehatan global yang mengakibatkan kerusakan fungsi ginjal secara progresif dan tidak dapat disembuhkan. Penderita PGK yang menjalani hemodialisis membutuhkan kemampuan manajemen diri yang baik untuk menjaga kepatuhan terhadap terapi serta mencegah komplikasi. Penelitian ini bertujuan untuk mengetahui perbedaan dalam manajemen diri antara penderita hemodialisis darurat dan reguler. Menilai perbedaan manajemen diri kedua kelompok ini penting karena berhubungan langsung dengan kepatuhan terhadap terapi dan pencegahan komplikasi. Penelitian menggunakan desain komparatif dengan pendekatan cross-sectional, melibatkan 58 responden yang dipilih berdasarkan kriteria tertentu. Kriteria inklusi untuk kedua kelompok adalah pasien dengan PGK yang menjalani hemodialisis terjadwal atau darurat, sedangkan kriteria eksklusi adalah pasien yang tidak sadar. Peneliti memilih pendekatan cross-sectional karena hanya mengumpulkan data pada satu waktu tertentu. Data dikumpulkan menggunakan instrumen HDSMI dan dianalisis dengan uji Mann Whitney. Hasil penelitian menunjukkan adanya perbedaan signifikan dalam manajemen diri antara kedua kelompok dengan nilai p=0,000. Kesimpulannya, pasien hemodialisis reguler umumnya lebih baik dalam manajemen diri karena mendapat edukasi yang lebih lengkap, sementara pasien hemodialisis darurat cenderung memiliki manajemen diri yang lebih rendah akibat keterbatasan edukasi dan pemantauan kesehatan yang kurang.

Differences in Self-Management of Emergency Hemodialysis Patients and Regular Hemodialysis in Chronic Kidney Disease Patients

Chronic kidney disease (CKD) is a global health disorder that causes progressive and irreversible damage to kidney function. CKD patients undergoing hemodialysis require good self-management skills to maintain adherence to therapy and prevent complications. This study aims to determine the differences in self-management between patients undergoing emergency and regular hemodialysis. Assessing the differences in self-management between these two groups is important because it is directly related to adherence to therapy and the prevention of complications. The study used a comparative design with a cross-sectional approach, involving 58 respondents selected based on specific criteria. The inclusion criteria for both groups were patients with CKD undergoing scheduled or emergency hemodialysis, while the exclusion criteria were unconscious patients. The researchers chose a cross-sectional approach because it only collects data at a specific time. Data were collected using the HDSMI instrument and analyzed using the Mann Whitney test. The results showed a significant difference in self-management between the two groups with a p-value of 0.000. In conclusion, regular hemodialysis patients generally have better self-management because they receive more comprehensive education, while emergency hemodialysis patients tend to have poorer self-management due to limited education and inadequate health monitoring.

Introduction

Chronic kidney disease (CKD) is a problem that is still a big challenge in the health care system. CKD is characterized by a progressive and irreversible decline in kidney function, so that the kidneys are unable to maintain the optimal balance of fluids, electrolytes, and the body's metabolite excretion function. This condition causes the accumulation of metabolic waste substances and excess fluid that Capable causes various systemic complications and increases morbidity and mortality rates in sufferers. CKD develops slowly and often does not show typical symptoms in the early stages, so many patients are only diagnosed in the advanced stages when kidney function has decreased significantly. (Yanti et al., 2022). Sufferers CKD Status Final Stage need to bekidney replacement therapy to maintain survival, one of which is hemodialysis. Hemodialysis As Procedureto Medical where Function to partially replace Work Deep Kidney Filtering blood top WasteSão metabolisme Stuart T excess fluid, so that the balance of the body's homeostasis can be maintained. Although hemodialysis Capable Prolong Life expectancySão sufferers CKD, therapy Related inseparable from various physical, psychological, social, and economic impacts. Sufferers The do hemodialisis berTerm Long Frequent Found limited activities, chronic fatigue, sleep disturbances, changes in body image, and dependence on health facilities. This condition directly affects the quality of life of patients. Hemodialysis able to drive life, Bring up Pressure large for sufferers, end A life that Minimal, increase mortality as well morbiditas (Saputra, 2024).

Several studies show that CKD patients undergoing hemodialysis have a high risk of experiencing a decrease in quality of life if they are not able to manage themselves well in daily life. So that in hemodialysis patients Mandatory Running Management on self Appropriately Optimize Condition his health (Anggraini et al., 2022). Education and self-management support can improve hemodialysis patient adherence and improve clinical conditions. However, most previous studies have focused on quality of life, medication adherence, or general clinical status, and have not specifically linked patient self-management to the incidence of emergency hemodialysis. If CKD patients have poor self-management, it can cause hemodialysis to be carried out *emergency*. Hemodialisis *emergency* It is a hemodialysis that is performed urgently or urgently in patients who experience shortness of breath due to massive excess fluid and metabolic poisoning. Good self-management behavior can help the implementation of

appropriate measures so as to prevent the occurrence of complications and prevent hospitalization so that hemodialysis becomes regular and does not trigger hemodialysis *emergency*. Novelties in the study this located in Specific focus on analyzing differences in self-management sufferers CKD undergoing regular hemodialysis with hemodialysis *emergency*. This study not only assesses self-management as a factor that affects the quality of life, but also as a preventive factor for emergency conditions so that it can reduce the incidence of hemodialysis *emergency*, improve patients' quality of life, and support medical services where to add effective also efficient.

According to the data *World Health Organization* (WHO) (2023), > 850 million individual The world suffers from chronic kidney disease and about 1.5 million people have to undergo Hemodialysis (HD) therapy. This data is expected to continue to increase every year. Based on the Indonesian Ministry of Health (Ministry of Health of the Republic of Indonesia) The prevalence of chronic kidney disease in 2023 reached 739,208 people and around 60% of patients had to undergo hemodialysis. The incidence of chronic kidney disease in East Java is 1.9%, (Riskesdas, 2022). The incidence of kidney disease in Lamongan is 8% of the population, while those undergoing hemodialysis are 2% of the total population (Wijayanti et al., 2022). Data from Muhammadiyah Lamongan Hospital in 2022-2023 has increased, namely regular HD by 14,283 in 2023. While the HD case *emergency* A total of 258 cases in 2023.

Method

The design of this study uses a comparative study research design with a cross sectional approach. This study was conducted at Muhammadiyah Lamongan Hospital with 58 samples of chronic kidney disease patients in the Dialysis Unit of Muhammadiyah Lamongan Hospital which is in line with the stipulation of the inclusion criteria. Sampling in regular hemodialysis patients was obtained by 31 patients who had been scheduled for hemodialysis according to the schedule, while sampling in emergency hemodialysis patients was 27 patients who came suddenly from the inpatient room or ICU. The following study applied *Hemodialysis Self-Management Instrument* (HDSMI) covering 18 questions with a score of 18-72. The results of the score of 49-72 indicate good self-management, 24-48 indicate moderate self-management

and <24 indicate poor self-management. The data was then analyzed by applyinganmann whitney *tester.*

Research Results

Table 1 Respondents Research on the inequality of self-management *of patients* with emergency hemodialysis accompanied by regular hemodialysis in patients with CKD in the Dialysis Unit of Muhammadiyah Lamongan Hospital.

General data	Features	N	%
Age	21-25 Years	2	3.4%
	26-45 Years	11	19.0%
	>46	45	77.6%
	Total	58	100.0%
Gender	Women	28	48.3%
	Male	30	51.7%
	Total	58	100.0%
Education	SD	22	37.9%
	SMP	10	17.2%
	SMA	21	36.2%
	College	5	8.6%
	Total	58	100.0%
Long HD	<1 Year	15	25.9%
	1-5 Years	35	60.3%
	>5 Years	8	13.8%
	Total	58	100.0%
HD Type	*Emergency*	27	46.6%
	Regular	31	53.4%
	Total	58	100.0%

Based on the distribution of table 1, it was reviewed that the researcher took samples of emergency hemodialysis patients at the Dialysis Unit of Muhammadiyah Lamongan Hospital 27 patients and 31 regular hemodialysis patients. Regular and emergency hemodialysis patients have an age range between >46 years as many as 77.6% of people and the average age is 50 years and above. The patient's gender is 51.7% of patients and women 48.3% patients. In this study, many patients who have the last education graduated from SD 37.9% of patients. Self-employed is the most occupation, consisting of 41.4% of patients. Hemodialysis patients underwent HD for 1-5 years as many as 60.3% patients. As for individuals with HD beyond 5

years, namely 13.8% of patients. The HD *emergency* patients involved in the study were 27 patients (46.6%) and regular HD 31 patients (53.4%).

Table 2 Self-management of emergency hemodialysis patients and regular hemodialysis at the Dialysis Unit of Muhammadiyah Lamongan Hospital

Value of self-management	HD Emergency		Regular HD	
	F	%	F	%
Bad (<24)	7	25.9	2	6.5
Medium (24-49)	20	74.1	3	9.7
Good (49-72)	0	0	26	83.9
Total	27	100.0	31	100.0

Based on table 2, it can be seen that the self-management of emergency Hemodialysis patients in the Hemodialysis Unit of Muhammadiyah Lamongan Hospital is almost 74 in total.1% of patients have moderate self-management and 25.9% of patients have poor self-management and it can be explained that out of 27 patients on regular hemodialysis 83 were obtained.9% of patients havegood self-management , 9.7% of patients aremoderately self-managed and 6.5% of patients have poor self-management.

Table 3 Inequalities in self-management of emergency hemodialysis *patients* accompanied by regular hemodialysis to CKD patients in the Dialysis Unit of Muhammadiyah Lamongan Hospital.

HD	Emergency	HD	Regular	Uji *mann whitney*
Min – max	Mean ± SD	Min - max	Mean ± SD	P
22 – 48	35.41 ± 8.820	22 - 62	54.42 ± 9.507	0.000

Based on table 3, in the self-management of emergency hemodialysis patients , a minimum result of 22 and a maximum of 48 was obtained, with an average value of 35.41 and a standard deviation of 8,820. Meanwhile, in the self-management of regular hemodialysis patients, a minimum result of 22 and a maximum of 62 were obtained, with an average value of 54.42 and a standard deviation of 9,507 with a p=0.000 (<0.05). Therefore, H1 is accepted, which means that there is a difference in the self-management of emergency hemodialysis patients with regular hemodialysis in CKD patients at the Dialysis Unit of Muhammadiyah Lamongan Hospital.

Table 4 Table Average self-management of emergency hemodialysis patients to self-management of regular hemodialysis patients in CKD patients in the Dialysis Unit of Muhammadiyah Lamongan Hospital.

Indicator	Average Score	
	HD emergency patients	Regular HD patients
Partnerships	7.26	11.35
Self-care	11.04	18.39
Troubleshooting	11.15	Sec. 15.77 The Gospel of Jesus Christ
Emotion management	Sec. 6.44 The Gospel of Jesus Christ	Sec. 9.55 The Gospel of Jesus Christ

Based on table 4.4 above, emergency hemodialysis patients in the partnership principle indicator obtained a score of 7.26. Meanwhile, regular hemodialysis patients obtained a score of 11.35. In the self-care indicator, emergency hemodialysis patients obtained a score of 11.04. While regular hemodialysis patients get 18.39. In the problem solving indicator in emergency hemodialysis patients , a score of 11 was obtained.15. Meanwhile, regular hemodialysis patients obtained a score of 15.77 In the emotional management indicator, emergency hemodialysis patients obtained a score of 6.44 Meanwhile, regular hemodialysis patients obtained a score of 9.Sec. 55.

Discussion

The results of the study can be found that the self-management of emergency hemodialysis patients is in the medium category 74.1% and 25.9% of patients have poor self-management. Self-management in emergency hemodialysis patients *with* the highest score is found in indicator 3, namely problem solving which obtains an average score of 11.15. High problem solving in hemodialysis patients is the result of the involvement of all medical parties and families. This medical education, physical and psychosocial distress and active involvement in self-care make patients more independent and allow them to remain responsive, rational, and adaptive when faced with critical situations.

Meanwhile, the average value of emergency hemodialysis patients that is lacking is found in indicator 4, namely emotion management which obtained an average score of 6.44. Poor emotional management in emergency hemodialysis patients where the patient is unable to manage his emotional reactions well to stressful situations related to chronic kidney disease. This has an impact on communication with the medical team being disrupted and the risk of emergency hemodialysis due to worsening stress. In this case, it is necessary to carry out education, psychosocial support and family involvement in increasing compliance

Self-Management of Emergency Hemodialysis Patients in Chronic Kidney Patients at the Dialysis Unit of Muhammadiyah Lamongan Hospital

The results showed the age of hemodialysis patients *emergency* at the Dialysis Unit of Muhammadiyah Lamongan Hospital showed that out of 27 hemodialysis patients *emergency* 41.4% are over 50 years old. This is in line with research (Health, 2022) About factors related to the compliance of chronic kidney disease patients in undergoing hemodialysis related to the age of majority ≤65 years which means that age relative shows the opportunity of negligence run Therapeutic hemodialysisSão. Phase Aging As Travel Biological Normal where Organ FunctionsIt began to decline. Each People able to have Status Decline on Organ Functions Bodyher. Increasing age indicates a progressive decrease in GFR declineHer ± 8 ml/min 1.73m2 per decade since aged 40 years.

Age over 50 years significantly affects the increased risk of *emergency conditions* for CKD sufferers where hemodialysis is performed. As we age, there is a decrease in the physiological function of vital organs such as the heart and lungs which play an important role in maintaining stability during dialysis procedures. Because patients aged >50 years may have comorbidities such as high blood pressure, heart disorders, diabetes mellitus, as well as metabolic disorders that increase the risk of acute complications such as intradialysis hypotension, arrhythmias, pulmonary edema, or stroke. The results of the study showed the gender of hemodialysis patients *emergency* at the Dialysis Unit of Muhammadiyah Lamongan Hospital showed that out of 27 hemodialysis patients *emergency* 29.3% of patients were female. Matter related to the same ResearchSão (Adolph, 2020), where to uncover the sufferer 61.2% of hemodialysis had female sex. Each disorder is capable of threatening individuals of all genders, However, in beberapa Distractions exist Inequality Frequency Between Two Genders of Humans. Further due to factors of differences in work, life culture, physiological/genetic conditions.

Women are more likely to experience depression and anxiety which can decrease quality of life and hemodialysis adherence due to emotional stress that worsens the perception of pain and lifelong dependence on the dialysis machine. Physically, CKD patients often experience chronic fatigue, anemia, pain, pruritus (hives), and sleep disturbances. Women also have a higher risk of anemia. Anemia occurs because the kidneys fail to produce erythropoietin, a

hormone that stimulates the production of red blood cells. Hemodialysis patients who experience chronic normochromic anemia that can cause emergency hemodialysis.

The results of the study show education in hemodialysis patients *emergency* at the Dialysis Unit of Muhammadiyah Lamongan Hospital showed that out of 27 hemodialysis patients *emergency* 24.1% of patients have an elementary education. further the same as his studies Adar (2020), indicating thatSão Paulo 26.3% sufferers have an elementary education. Education Minimal able to influence The Bad Understanding beand awareness Regarding Health Especially in Measure konsumsi Liquid where it can be Influential other Body Sufferers of disorders Kidney And more and more. height Status Education individual throw Relative Read More Open Receive Impact Positive externalities About information about health. Hemodialysis patients who have low education, especially only up to the elementary level, have an influence on the risk of *emergency* conditions. Because patients with low levels of education tend to have limited health literacy, they are often unable to recognize the early signs of an emergency such as shortness of breath, severe edema, or decreased consciousness. They are also at risk of not understanding the importance of adhering to hemodialysis schedules, restricting fluid intake, and taking medications appropriately. As a result, it can worsen the patient's condition and increase hospitalization and death rates. Therefore, education that is tailored to the patient's level of understanding is essential for the prevention of emergency *conditions* where they should be avoided.

Results Studies prove Long HD otheron sufferers hemodialisis *emergency* at the Dialysis Unit of Muhammadiyah Lamongan Hospital showed that out of 27 hemodialysis patients *emergency* 22.4% of patients underwent hemodialysis 1-5 years. In the direction of his study Wahyuni et al., (2024), sufferers with 63.8% underwent hemodialysis therapy >1 year with 53 patients. Hemodialysis patients are at high risk of developing complications such as physical and mental fatigue that can trigger decreased medication adherence and feel imbalance electrolyte and liquid, so that it will triggers the presence of abnormalitas di The results Düsseldorf excreted into urine So. will Make uremia. Conditions uremia ini need Application such as kidney therapy that e.g. with hemodialysis. Growing LotsIts production Liquid a sufferer who do hemodialisis Apply Sucking fluids from the bodySão. Old Time Therapeutic hemodialysis sufferers CKD can be expected Increase quality live sufferers. This research

berkontribusi crucial to clinical practice, Read More Self-management sufferers Hemodialysis, with some key implications of increasing understanding of complication risk by knowing that patients undergoing emergency hemodialysis are more prone to physical and mental complications, health care workers can emphasize more intensive education on self-management, including fluid management, diet, and adherence to drug therapy. The findings underscore the need for the active involvement of families and medical teams in supporting patients. This support can improve the patient's compliance, motivation, and ability to manage stress, thereby reducing the risk of complications also adds quality life.

Patients with emergency *hemodialysis* treatment often experience high stress due to urgent medical conditions and significant lifestyle changes. High stress is directly related to low adherence to fluid restrictions and medication. This stress can reduce the ability of patients to manage their condition effectively. The longer HD lasts, the more patients experience complications such as bone pain, fatigue, sleep disturbances, hives, intradialysis hypotension that affect quality of life and add to the stress burden. The results of the self-management study of regular hemodialysis patients showed that 81.55% of regular hemodialysis patients had good self-management. It is shown that regular hemodialysis patients at the Dialysis Unit of Muhammadiyah Lamongan Hospital are able to manage themselves well so that regular hemodialysis patients can perform hemodialysis regularly according to the schedule. Good self-management in regular hemodialysis patients is found in indicator 2, namely self-care which obtains an average score of 18.39. High self-care in hemodialysis patients indicates that the patient has a strong awareness, ability, and commitment to maintain his or her health independently. One of them is shown through the ability to regulate fluid intake and eat low-potassium foods independently to prevent complications and improve the quality of life of patients. Following the advice of the medical team is one of the important indicators that the patient has good self-care skills, strong partnerships, and high awareness of his condition as a person with chronic kidney disease in order to have a high quality of life and prevent serious complications, such as excess fluids, acidosis, to death. Meanwhile, the missing score in indicator 4 is emotion management which obtained an average score of 9.55. Lack of emotional management in hemodialysis patients where the patient is unable to manage his emotional reactions well to stressful situations related to his chronic kidney problems as well as the

hemodialysis process that is undergone periodically. Related issues have an impact on communication with the medical team being disrupted and the risk of emergency hemodialysis.

Self-Management of Regular Hemodialysis Patients for Chronic Kidney Patients at the Dialysis Unit of Muhammadiyah Lamongan Hospital

Based on the above research, regular hemodialysis patients at the Dialysis Unit of Muhammadiyah Lamongan Hospital Loading Self-management by good. In the context of the reason Hemodialysis patients often receive education from healthcare professionals about fluid diet, medication, and lifestyle so that they have a better knowledge of their condition and how to manage it. Based on the results of the study, it shows that the self-management of regular hemodialysis patients is better than the self-management of hemodialysis patients *emergency*. But based on the mean value of the two groups obtained different values, in the group of hemodialysis patients *emergency* obtained a score of 35.41 in the moderate category and in regular hemodialysis patients obtained a score of 54.42 in the good category. The mean difference between the two is 19.01. The results of the mean value show that the self-management of regular hemodialysis patients is better than self-management sufferers hemodialisis *emergency*. Mempoor self-regulation in sufferers Emergency hemodialysis which includes nonadherence to medication, uncontrolled diet, neglect of health monitoring, and psychosocial problems can worsen the condition of CKD patients in increasing the risk of events requiring hemodialysis *emergency* (Vaidya et al, 2022). Emergency hemodialysis patients who have a poor lifestyle such as a diet high in salt, sugar, or saturated fat, smoking, excessive alcohol consumption and lack of sleep also contribute to an increased risk of hemodialysis *emergency* (Muntner, 2022). Poor adherence to medication (e.g., skipping dialysis sessions) risks accumulating toxins in the body (uremia), excess fluids, and electrolyte imbalances such as hyperkalemia (high potassium levels) associated with an increased risk of death and cardiovascular events that could potentially lead to the need for emergency dialysis (Su et al, 2021).

Self-management forpatients with chronic kidney disease who perform hemodialysis is an active and continuous process that involvesindividual abilities to manage physical, psychological, and social aspects related to their disease. Self-management includes adherence to hemodialysis schedules, dietary and fluid intake arrangements, medication adherence,

symptom monitoring, and the ability to make informed decisions when health conditions change. One of the theories underlying self-management behavior is the *self-efficacy theory* put forward by Albert Bandura. In regular hemodialysis patients, self-efficacy is generally better because the patient has had repeated experiences in undergoing therapy, receiving health education, and receiving support from health workers. Experience success in controlling fluid intake, adhering to hemodialysis schedules, and recognizing signs of worsening conditions can increase a patient's confidence in his or her ability to manage the disease. Verbal persuasion from health workers through education and counseling also plays an important role in strengthening the self-efficacy of patients. In contrast, emergency hemodialysis patients often have low self-efficacy due to limited knowledge, lack of experience in therapy, and unstable physical and emotional conditions. This low self-efficacy has an impact on low self-management, such as non-adherence to diet and fluids, delays in seeking medical attention, and inability to recognize signs of distress.

The results of the study showed that the age of regular hemodialysis patients at the Dialysis Unit of Muhammadiyah Lamongan Hospital showed that out of 31 regular hemodialysis patients, 36.2% were over 50 years old. In line with his study (Kuwa et al., 2022), many of the elderly patients (55–65 years) which percentage 41%. Read More, age have a strong impact on efforts to deal with Problem CKD dilengkapi Treatment hemodialisa. Age range 40–70 years, Performance filtrasiHe was able to Slow down until 50% dibanding NormalSão, So it will decrease the ability renal tubulesin mereabsorbsi also Concentration *urinee*, downgrade toberEmptying capability Pockets Urinary by sempurna Able to add to the threat Infection also obstruksi, As for Decline on iTaking the Liquid Includes Factors The threat of Damage Function KidneySão. On the other hand, Factors Age beyond 50 years make otherElasticity of blood vesselsSão Downhill until there is a Forgivenessn, finally triggers hypertension. When encountered blood vessels Broken, nephron orBlood Filter Failed Functional optimal sebab Minimum Supply Oxygen also nutrition. Patients over the age of 50 generally have a better awareness of the importance of treatment, but may face physical and logistical challenges, such as limited mobility, family dependence, or barriers to access to healthcare facilities. In addition, some elderly patients may experience mild cognitive impairment that may interfere with understanding of hemodialysis schedules, diets, or supportive medications. Elderly patients

often have lower immune systems, making them more susceptible to hypotension when undergoing hemodialysis.

The results of the study showed that the gender of regular hemodialysis patients at the Dialysis Unit of Muhammadiyah Lamongan Hospital showed that out of 31 regular hemodialysis patients, 34.5% of the patients were male. In the direction of his study (Wahyuni et al., 2024), men have more kidney function disorders than women such as kidney stone disease, the number of respondents is 83 more who experience CKD, namely 57 men.8% of patients. This is because the culture of men's lives is at risk of being threatened by CKD because smoking also drinks energetic fluids that cause tension in the kidney organs so that the kidneys work strongly. Male patients generally have a relatively better physical ability to tolerate the side effects *of dialysis* (e.g. hypotension or fatigue). This can support the long-term sustainability of therapy if accompanied by proper education and social support. However, male patients tend to have lower levels of adherence to hemodialysis schedules, strict diets, and fluid restriction than women, which can lead to hemodialysis irregularities that lead to complications such as fluid overload, hypertension, or electrolyte disorders. The results of the study showed that education in regular hemodialysis patients at the Dialysis Unit of Muhammadiyah Lamongan Hospital showed that out of 31 regular hemodialysis patients, 20.7% of patients had high school. This education is in line with research research Wahyuni et al., (2024) where sufferers do hemodialisis berEducation End SMA 47.6% of patients. Research Caecilia et al., (2022), educationSão Patients mayoritas High School 46.5% of patients. The quality of life of patients undergoing hemodialysis is influenced by educational factors where the higher the level of education, the better the quality of life of patients undergoing hemodialysis. In addition to educational factors, psychological and social factors also greatly affect patients' self-management scores, especially in patients facing emergency situations. High levels of stress, anxiety related to health conditions, and uncertainty about hemodialysis procedures can reduce the patient's ability to make decisions and manage themselves effectively. Social support from family, friends, and healthcare workers has been shown to be an important factor in increasing confidence, adherence to therapy, and the patient's ability to cope with physical and emotional challenges during hemodialysis. Therefore, expanding the discussion on psychological and social factors provides depth of interpretation of the research results and emphasizes the

importance of a holistic approach that considers the patient's educational, psychological, and social support conditions in the development of educational and treatment interventions.

Patients who have high education can control their disease and the lower the education will make knowledge of the disease at risk less and less. Patients with a high school education tend to be more independent in making decisions related to their health and have a higher awareness of the importance of long-term adherence to hemodialysis therapy. They have the ability to read, write, and understand medical instructions that allow patients to more easily follow the education provided by health workers, including through print or digital media. This is the key to preventing complications and avoiding emergency situations. The results showed that the length of HD in regular hemodialysis patients at the Dialysis Unit of Muhammadiyah Lamongan Hospital showed that out of 31 regular hemodialysis patients, 37.9% of patients underwent hemodialysis for 1-5 years. This is in line with research (Wahyuni et al., 2024) 63 patients who underwent hemodialysis therapy >1 year.8% with 53 patients. CKD Patients able to find its instability electrolyte and liquids, finally triggers abnormalitas di Results The Düsseldorf Expressed to *urinee* So. will cause uremia. Conditions uremia Needs to be handled For example Kidney Therapy e.g. hemodialisis. Growing LotsIts production Liquid throw the more Length Patients must hemodialisis To Suck Body fluidsSão. OldSão do hemodialisis A sufferer CKD can be expected Increase quality liveSão. However, over time, hemodialysis patients are also at high risk of developing complications, physical and mental fatigue that can trigger decreased medication adherence.

Patients undergoing emergency *hemodialysis* often experience high stress due to urgent medical conditions and significant lifestyle changes. High stress is directly related to low adherence to fluid restrictions and medication. This stress can reduce the ability of patients to manage their condition effectively. The longer HD lasts, the more patients experience complications such as bone pain, fatigue, sleep disturbances, hives, intradialysis hypotension that affects quality of life and adds to the stress burden. This study shows that the level of education of patients plays an important role in the ability to manage their disease. Patients with higher education tend to have a better understanding of their health conditions, while patients with lower education are at risk of having limited knowledge. In particular, patients with a high school education or higher tend to be more independent in health-related decision-making and

have a higher awareness of the importance of long-term adherence to hemodialysis therapy. The ability to read, write, and understand medical instructions allows patients to follow health education provided by medical personnel, both through print and digital media, thus becoming the key in preventing complications and emergency situations.

The contribution of the novelty of the following study lies in the widespread understanding of the relationship between education, the length of time to do hemodialysis, the level of stress, and the patient's self-management ability. The results of the research are the basis for advancing education schemes in a more targeted manner, especially for patients who are at risk of experiencing hemodialysis emergencies. The designed educational program can emphasize increasing patients' understanding of chronic kidney disease and hemodialysis therapy, stress management and coping strategies in dealing with emergency situations, involvement of families and medical teams as active partners in decision-making and monitoring of care, delivery of education tailored to the patient's level of education through easily accessible media. With this approach, education programs can more effectively improve patient adherence, reduce the risk of complications, and prevent emergencies from occurring, thereby supporting comprehensive and sustainable care.

Differences in Self-Management of Emergency Hemodialysis Patients to Regular Hemodialysis in Chronic Kidney Patients at the Dialysis Unit of Muhammadiyah Lamongan Hospital

The results of this study found that the difference in self-management in emergency hemodialysis patients based on the results of the minimum score showed the results of 22 which were categorized as sufficient and the maximum value was 48. In contrast to the minimum score results in regular hemodialysis patients, 22 results were obtained which were in the good category and the maximum score was 62. The minimum score obtained by regular hemodialysis patients is higher than the minimum score for emergency hemodialysis patients. The disparity in self-management of hemodialysis patients in emergency hemodialysis patients accompanied by regular hemodialysis showed that of 27 emergency hemodialysis patients , 74.1% of patients had moderate self-management. Meanwhile, in patients with regular hemodialysis, almost all 83.9% of patients have good self-management. This difference exists where in the self-management of regular hemodialysis patients have followed repeated education from the medical team, have been trained to limit food/fluids according to recommendations. In contrast

to emergency hemodialysis patients who have minimal knowledge because they have just been diagnosed and have not had time to get education and often do not understand the dietary prohibitions (potassium, sodium, liquids).

The results of this study are in line with the research Lansia et al., (2021), where the results of the study were obtained by patients who were respondents who had high self-management (Nasution et al., 2023). According to Astuti et al (2023), said that many factors affect good self-management in hemodialysis patients, such as level of knowledge, family support and self-efficacy. Sufficient knowledge will give Pro-active attitude is also cooperative. Sufferers hemodialisisSão Capable Add Efforts in creating Steps The Capable Support Application More self-management optimal. Patients undergoing regular hemodialysis have generally undergone education on dialysis schedules, dietary arrangements and fluid restriction. They have also usually formed routines and habits to maintain adherence to medical protocols and monitor daily symptoms independently (Pralisa, 2021). On the other hand, patients who come in in *emergency* It usually shows low self-management due to educational limitations, low health awareness, or due to delayed diagnosis. They tend not to understand the importance of blood pressure control, fluid restriction, and monitoring for signs of distress such as shortness of breath, seizures, or extreme swelling. Hemodialysis *emergency* It is often done due to a failure to recognize or treat early symptoms, leading to acute accumulation of toxins or excess fluid. Self-management in patients *emergency* often caused by other factors such as low health literacy, education, family support and emotional management (Putri, 2020)

Based on table 4, there are 4 indicators, namely: partnership, self-care, problem-solving and emotion management. The results of this study are based on the highest average score in emergency hemodialysis patients is in indicator 3, namely problem solving which obtains an average score of 11.15 while in regular hemodialysis patients on indicator 2, namely self-care, an average score of 18.39. The lowest average score in emergency hemodialysis patients is indicator 4, namely emotion management which obtains a score of 6.44 while regular hemodialysis patients had the lowest average score as well as on indicator 4 who obtained a score of 9.55. This difference may be influenced by several factors related to the limitations of health education and patient awareness, especially in the emergency group. Patients who start hemodialysis in an emergency often do not have the opportunity to receive comprehensive

education about CKD, the importance of adherence to fluid restrictions, medication, and early self-management strategies. Regular hemodialysis patients typically undergo repeated dialysis sessions, which provides more opportunities for healthcare teams to deliver repeated education and monitor the patient's progress in understanding over time. This contributed to a higher self-care score in the regular group compared to emergency patients who had not been exposed to the continuing education series. In the self-care indicators, regular hemodialysis patients are higher because they have better control over their health conditions such as managing fluid diittion (limiting salt, potassium, phosphorus, and fluid intake so that they have good self-management to improve their quality of life. Meanwhile, in hemodialysis patients *emergency* The highest score is in problem solving. Problem-solving will not be maximized without the support of the family and the involvement of all parties in the medical team. Patients who are involved in the decision-making process tend to be more obedient and feel valued. This will have a positive impact on their motivation to take care of themselves. Therefore, a holistic approach is necessary for patients to receive comprehensive and sustainable care. The findings of this study education should be provided not only to regular patients, but also immediately after the patient is stable post-emergency. Educational materials need to be tailored to the patient's abilities at that time, focusing on self-management, problem-solving strategies, and emotional management. The treatment approach must involve the patient, the family, and the medical team as a unit. Family support can improve problem-solving effectiveness and patient compliance (Hanafi, 2022).

In the partnership indicator, the average score of regular hemodialysis patients was higher than hemodialysis *emergency* Because regular hemodialysis patients have a regular hemodialysis schedule so that they have a partnership between patients and health workers, especially nurses, is not just a relationship between educators and service recipients, but an active cooperation in achieving therapy goals. On the emotional management score of hemodialysis patients *emergency* and regular hemodialysis had the lowest scores. The Psychic Disorders experienced sufferers gangguan Kidney by Chronicle and do hemodialisis i.e. Emergency, to suppress his anxiety can be given Intervention Non farmakologis through ways to support quality live They are like Therapy *spritual self hhealLing*, healing by doing dhikr and prayer Stuart T Tausiyah So it makes the sufferer CKD Able to distract Anxiety through

Spiritual ActionsStuttgar or divert by thinking about God. (Hasanah, 2022). This shows that hemodialysis patients are unable to manage emotions because they often do not reduce the stress resulting from dialysis and cannot discuss with the health care team comfortably. Support from family and the surrounding environment is essential in helping patients manage their emotions. Family involvement in the treatment process and providing emotional support can increase confidence and reduce feelings of anxiety in patients. The purpose of this study is to use a cross-sectional research design, which only provides an overview of the condition at a single point in time, so that it cannot show changes in the patient's self-management ability over time or the causal relationship between stress, compliance, and self-management ability. In addition, the population is limited, both in terms of number and demographic and clinical diversity, so the findings may not be widely generalized to all hemodialysis patients. The direction for further research is to use a longitudinal design to assess changes in patients' self-management, compliance, and emotional management abilities over time, so as to assess the effectiveness of educational and treatment interventions. Engage a larger and more diverse population, including patients of different ages, educational backgrounds, and hemodialysis facilities, to improve the generalization of findings. Exploring family- and health team-based educational interventions, including stress management and coping techniques, to determine the influence of social support on patient emotional management and compliance.

Conclusion

Most of the emergency *hemodialysis patients* at the Dialysis Unit of Muhammadiyah Lamongan Hospital have moderate self-management and a small number have poor self-management while some of the regular hemodialysis patients at the Dialysis Unit of Muhammadiyah Lamongan Hospital have good self-management and there are differences in the self-management of emergency hemodialysis patients with regular hemodialysis in patients with chronic kidney disease at the Dialysis Unit of Muhammadiyah Lamongan Hospital. This research makes an important contribution in the field of self-management of hemodialysis patients, especially in patients undergoing hemodialysis in an emergency. The findings showed that there was an imbalance in self-management skills between emergency and regular hemodialysis patients on indicators of self-care, problem-solving, partnership, and emotion

management. Regular hemodialysis patients tended to have higher scores of self-care and partnership, while emergency patients showed the highest scores on problem-solving, but both groups had the lowest scores on emotion management. These results emphasize the need for a holistic approach in patient care, including family and medical team involvement, timely education, and stress management and coping strategies. While this study provides valuable insights, there are still limitations, such as the lack of in-depth analysis of the factors that influence self-management and practical recommendations that can be applied clinically.

Therefore, the authors are advised to undertake a revision that includes a more detailed presentation of the factors that affect the patient's self-management ability, as well as the development of more concrete practical recommendations to support the treatment and education of hemodialysis patients, both in regular and emergency conditions.

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