Compliance Therapy Of Patients With Chronic Kidney Failure (CKF) In Hemodialysis Room of Puri Husada General Hospital

Hastuti Marlina, Raviola, Miratu Megasari

Abstract: Compliance is an act of someone who reflects the behavior during treatment according to the recommendations of treatment providers, it is important to pay attention especially for patients with Chronic Kidney Failure (CKF) who get hemodialysis therapy to maintain kidney function. This study aims to determine the factors that influence compliance with CKD patients during hemodialysis therapy at the Puri Husada Tembilahan General Hospital. This type of research is quantitative with a cross-sectional study design. Samples totaling 47 people were taken with a total sampling technique. Data collection using a questionnaire that has been tested for validity and reliability. Data analysis was performed univariate, bivariate and multivariate. The results showed the proportion of patients with chronic renal failure who adhered to hemodialysis therapy by 76.6% while those who did not comply were 26.4%. The final results of the multivariate test revealed only four variables (motivation, family support, hemodialysis duration, and knowledge) related to adherence to undergoing hemodialysis therapy. Motivation variable has the greatest relationship with the POR value (95% CI), that is 9.029 (1,267-64,344). Good motivation is certainly related to family support in encouraging patients with kidney failure in undergoing hemodialysis therapy, therefore it is expected that families will play a role in providing home care for patients with chronic kidney failure because it will impact on adherence to carrying out hemodialysis therapy.

Keywords: Compliance, Chronic Kidney Failure, Hemodialysis

1. INTRODUCTION

Compliance is generally defined as a person's actions that reflect behavior during treatment or therapy as recommended by the service provider [1]. Adherence to therapy is an important part that must be considered, especially in patients with chronic renal failure (CRF) who undergo hemodialysis therapy to maintain kidney function [2]. Chronic Kidney Failure is a chronic syndrome characterized by a persistent and irreversible decline in kidney function [3]. End-stage Chronic Kidney Failure is also called End-Stage Renal Disease (ESRD) which requires treatment with kidney transplantation or dialysis therapy [3]. Kidney transplantation requires a fairly high cost and limited availability of kidneys causes patients with Chronic Kidney Failure to choose hemodialysis therapy [2]. Hemodialysis is a therapeutic process replacing kidney function in the form of dialysis using an artificial kidney machine that aims to filter and dispose of the remaining toxic metabolic products that should be discarded by the kidney [4]. Hemodialysis therapy cannot completely cure Chronic Kidney Failure, but hemodialysis can maintain the survival of patients with Chronic Kidney Failure. Patients with chronic kidney failure who undergo hemodialysis can survive reaching 317 months (26 years 5 months). Factors that play a role in the success of quality hemodialysis are chronic renal failure patients adherence to diet and therapeutic schedule [5]. The 2010 Global Burden of Disease study, chronic kidney failure, increased by 25% [6]. Data from the World Health Organization (WHO) in 2012 amounted to 50% of patients with chronic kidney failure who did not receive treatment at 12.5% and eventually died [7]. In the United States in 2013 more than 615,000 patients with chronic kidney failure and as many as 430,000 who did hemodialysis therapy, 92,000 died from complications and the remainder had kidney transplants [8]. Based on data from Basic Health Research (Riskesdas) in 2013 the prevalence of patients with chronic kidney failure based on doctor's diagnosis increased by 10% [9]. Patients with chronic renal failure undergoing hemodialysis therapy also increased from 9,862 in 2017 to 51,504 in 2015 and in Riau there were 11,655 cases of chronic kidney failure patients undergoing hemodialysis therapy [10]. The 2016 Bawatong study at RSUP Prof.Dr.R.D Kandou Manado agreed that hemodialysis therapy was needed and was necessary to recover from chronic renal failure patients themselves so that the therapy carried out provided health benefits for survivors with chronic kidney risk [11]. In Puri Husada Tembilahan Regional General Hospital, protected kidney failure patients also increase every year, namely 246 people in 2015 to 412 in 2016 and 534 in 2017 [12]. However, in practice, there are still non-compliant hemodialysis patients who come to do hemodialysis according to a predetermined schedule. In 2016 as many as 35.2% of patients with chronic renal failure who were not compliant (not on schedule) did hemodialysis therapy, so that patients were rating with increasingly severe complaints such as anemia, shortness of breath, edema, increased blood acidity and bleeding. Of course, this affects the mortality and morbidity rates in patients with chronic renal failure [4]. Various research results concerning many factors involving chronic kidney failure patients in conducting hemodialysis therapy include knowledge, family support, level of education, psychological nurses' attitudes, patient age [11], [13], [2], [14], [15] RSUD Puri Husada Tembilahan "This study aims to look at the relationship between respondents 'knowledge variables, family support, hemodialysis duration, depression, nurses' attitudes, eating patterns, patient age and patient motivation towards schedules.

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**References:**

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2 REVIEW OF LITERATURE

2.1 Cronic Kidney Failure
Kidney failure is damage to kidney function that can not get rid of the remnants in the blood, this happens gradually which takes place gradually. Clinically kidney failure is characterized by damage to kidney function that can not be changed, so that kidney function must be replaced by dialysis or kidney transplantation. Criteria for renal failure, namely kidney damage for more than 3 months, consists of structural abnormalities, with or without a decrease in glomerulus filtration rate (GFR). Kidney failure can also occur with a GFR of less than 60ml / min / 1.73m² which lasts for more than 3 months [8].

2.2 Management of Chronic Kidney Failure
Management of chronic kidney failure includes specific therapies for basic diseases, prevention, and treatment of comorbid conditions, slowing the progression of kidney function, prevention, and treatment of complications as well as kidney replacement in the form of dialysis or kidney transplantation. The most appropriate time for treatment of basic disease is before the decline in LPG (Glomerulus Filtration Rate), so that kidney deterioration does not occur. In normal ultrasound renal size, biopsy and renal examination can determine the exact indication of specific therapy. Conversely, if the LFG has decreased to 20-30% from normal, therapeutic therapy for the basic disease is not very useful [8].

3 METHOD
This type of research is quantitative with a cross-sectional design. The location of the study was in the hemodialysis room of Puri Husada Tembilahan Regional General Hospital for 2 months. The population is all outpatient chronic kidney failure patients in October 2018 totaling 47 people using total population sampling techniques. Data collection techniques using a questionnaire consisting of questions about the dependent and independent variables to be examined that have met the requirements of the validity and reliability of a questionnaire. Data analysis was performed univariate, bivariate and multivariate.

4 RESULT AND DISCUSSION
Based on the research that has been done, it is obtained the characteristics of respondents seen from the sex of the majority of men is 26 (55.3%), the most age is 41-59 years as much as 55.3%, occupations vary such as farmers, self-employed, private, civil servants, education mostly graduated from elementary school by 15 (29.8%) and risk factors for chronic kidney failure in the form of hypertension as much as 18 (38.3) and diabetes as much as 14 (29.8%). Univariate analysis is produced in the form of a frequency distribution of dependent and independent variables. For the variable of compliance with hemodialysis therapy as much as 23.4% were not compliant and 76.6% were compliant. For the knowledge variable, 53.2% had less knowledge about hemodialysis therapy and 46.8% had good knowledge, 51.1% had undergone hemodialysis therapy for more than 1 year and 48.9% had hemodialysis therapy for less than 1 year. The age of the majority of respondents over 45 years was 72.3% and the age of less than 45 years was 27.7%. The majority of the attitudes of hemodialysis nurses support in providing education about hemodialysis to respondents by 89.4%. As many as 89.4% of respondents who underwent hemodialysis therapy did not experience depression. As many as 70.2% of respondents went on a good diet and as many as 55.3% of respondents had high motivation for their survival. The results of bivariate analysis are known from eight independent variables studied, there is a relationship between knowledge variables (P value 0.031; POR (95% CI) = 5.625 (1.062-29.799)), family support (P value = 0.010; POR (95% CI) = 6.933 (1.525-31.515)), length of hemodialysis (P value = 0.015; POR (95% CI) = 7.071 (1.328-37.651)), nurses' attitudes P value = 0.008; POR (95%) = 20.000 (1.933-206.949)), the patient's age (P value = 0.000; POR (95%) = 16.533 (3.243-84.280)), and motivation to recover (P value = 0.006 POR (95 %) = 9.000 (1.675-48.367) to the compliance of hemodialysis therapy in patients with chronic renal failure. The most significant variable was the nurses' attitude seen from the large POR value, meaning that respondents with unsupportive nurses' attitudes had a risk of 20 times not complying with hemodialysis therapy according to the schedule compared to respondents who were nurses' attitudes that were supportive. Two unrelated variables are depression (P value 0.668) and dietary pattern (P value = 0.577). See table I.

Next, do a bivariate selection to determine whether each variable is included in the multivariate test with the condition that the value of P-value <0.25. The variables that followed the next multivariate selection were knowledge, family support, hemodialysis duration, dietary pattern (P value> 0.25 but substantially related to the dependent variable, then included in multivariate selection), age and motivation. For nurses and depression, attitudes variables do not enter because the value of P value> 0.25. The final results of the multivariate test were obtained from six variables analyzed there were four related variables namely motivation (P value 0.028; POR (95% CI) = 9.029 (1.267-64.344)), family support (P value 0.001; POR (95% CI) = 3.768 (0.680-20.893)), length of hemodialysis (P value 0.004; POR (95% CI) = 2.226 (0.396-12.521)) and knowledge (P value 0.009; POR (95% CI) = 1.636 (0.274-9.761) ) with hemodialysis therapy compliance. See table II.

<p>| Table-I: Bivariate Analysis of Dependent and Independent Variables |
|-------------------|--------|-----------------|</p>
<table>
<thead>
<tr>
<th>No</th>
<th>Variable</th>
<th>Pvalue</th>
<th>Prevalens Odds Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Knowledge</td>
<td>0.031</td>
<td>5.625 (1.062-29.799)</td>
</tr>
<tr>
<td>2</td>
<td>Family support</td>
<td>0.010</td>
<td>6.933 (1.525-31.525)</td>
</tr>
<tr>
<td>3</td>
<td>Long hemodialysis</td>
<td>0.015</td>
<td>7.071 (1.328-37.651)</td>
</tr>
<tr>
<td>4</td>
<td>The attitude of the nurse</td>
<td>0.008</td>
<td>20.000 (1.933-206.949)</td>
</tr>
<tr>
<td>5</td>
<td>Depression</td>
<td>0.668</td>
<td>-</td>
</tr>
<tr>
<td>6</td>
<td>Diet pattern</td>
<td>0.577</td>
<td>-</td>
</tr>
<tr>
<td>7</td>
<td>Age</td>
<td>0.000</td>
<td>16.533 (3.243-84.280)</td>
</tr>
<tr>
<td>8</td>
<td>Motivation</td>
<td>0.006</td>
<td>9.000 (1.675-48.367)</td>
</tr>
</tbody>
</table>

<p>| Table-II: Final Multivariate Analysis |
|-------------------|--------|-----------------|</p>
<table>
<thead>
<tr>
<th>No</th>
<th>Variable</th>
<th>Pvalue</th>
<th>Prevalens Odds Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Motivation</td>
<td>0.028</td>
<td>9.029 (1.267-64.344)</td>
</tr>
<tr>
<td>2</td>
<td>Family support</td>
<td>0.001</td>
<td>3.768 (0.680-20.893)</td>
</tr>
<tr>
<td>3</td>
<td>Long hemodialysis</td>
<td>0.004</td>
<td>2.226 (0.274-9.761)</td>
</tr>
<tr>
<td>4</td>
<td>Knowledge</td>
<td>0.009</td>
<td>1.636 (0.274-9.761)</td>
</tr>
</tbody>
</table>
4.1 Motivation
The results showed the motivation to recover from respondents was related to compliance with hemodialysis therapy in patients with chronic kidney failure. The motivation shown is in the form of the respondent’s enthusiasm to go to the hospital to do hemodialysis therapy, respondents believe that with routine hemodialysis therapy the condition will improve, respondents are excited about therapy because at the therapy site they are happy to meet with friends and many people. According to Kusuma the motivation of chronic kidney failure patients undergoing hemodialysis consists of intrinsic and extrinsic motivation. Patients with chronic kidney failure follow the doctor’s recommendations related to the disease on the grounds done of their own volition and because others will be angry if they do not do so. Reasons for one’s own will include intrinsic motivation and others’ anger including extrinsic motivation [16]. In line with the results of the 2016 Izzati study on factors related to patient compliance undergoing hemodialysis therapy in the hemodialysis room at Achmad Mohtar Bukit Tinggi Hospital, with a statistical test result of p-value 0.045 (p <0.05). In this study, motivation comes from within and outside the respondent’s self, so they are always eager to always obediently undergo hemodialysis, from within the spirit of the respondent to recover and from outside the motivation of family and friends [17]. This study is in line with the study of Syamsiah (2010), motivation is the most influential factor and requires chronic renal failure patients to encourage their behavior to routinely undergo hemodialysis therapy [18]. The results of this study are also in line with Herman’s research in 2015 results obtained using statistical tests obtained P-value 0.009. meaning that there is a significant relationship between motivation and patient compliance with hemodialysis therapy [19]. Supported by observations and interviews by researchers with respondents in the hemodialysis room, the majority of respondents who adhere to hemodialysis therapy said that they remain enthusiastic to carry out therapy according to the schedule because they feel better changes in themselves and are confident with routine therapy that their body condition will be better. stable. Besides, support from family and nurses in hemodialysis room is very helpful in increasing the motivation of respondents to continue implementing hemodialysis therapy according to a predetermined schedule. Motivation is needed to help respondents to improve compliance in undergoing hemodialysis therapy, respondents who have high motivation to recover will undergo hemodialysis therapy routinely and regularly, while respondents who have low motivation refuse to do hemodialysis. Based on the data characteristics of the most age respondents that is 41-59 (55.3%), the age range of respondents still have a strong enthusiasm for life that encourages high motivation to maintain his body condition and carry out hemodialysis therapy according to a predetermined schedule.

4.2 Family Support
The results showed that family support was related to respondents’ compliance with hemodialysis therapy. Family support is seen in the form of sending respondents to the hospital to do hemodialysis therapy, the family always gives love and attention so it is not easy to despair in undergoing hemodialysis therapy. The results of this study are in line with research by Fatmawati, (2014) showing that there is a relationship between family support and compliance with hemodialysis therapy with a p-value of 0.009 and a POR of 2.809. Some patients undergoing hemodialysis therapy are not accompanied by family, this is due to the patient’s family still thinks the patient is still able to carry out the therapy independently, besides the patient’s family is also busy working so that they cannot accompany or accompany the patient to carry out hemodialysis therapy [4]. The results of this study are in line with Manguma’s research, (2014) with the title factors relating to compliance with CRF patients undergoing hemodialysis at BLU RSUP Prof.Dr.R.Kandou Manado, showing there is a relationship between family support and compliance with hemodialysis therapy with p-value 0.009 <0.05 [20]. Research by Thong et al. (2006), with the title Social Support Predict Survival in Dialysis Patients, also said that there was a significant relationship between family support and compliance with hemodialysis therapy, family support is very influential on the mental health of family members will affect health (through healthy behavior), psychological and physiological, where family support it can be given through emotional support, information or giving advice [21]. The results of this study are in line with the research of Izzati (2016) about the factors related to the compliance of patients undergoing hemodialysis in the hemodialysis room at Achmad Mohtar Bukit Hospital, high, with the statistical test obtained was p-value 0.017 (p <0.05). Where in general the patient’s family is always looking for information about the disease being suffered by the patient and the family always provides information about the importance of hemodialysis therapy and encourages patients to carry out therapy according to a predetermined schedule [17]. Based on observations and interviews in the hemodialysis room, respondents who received family support were more obedient than respondents who did not get family support because family support could influence respondents’ behavior in undergoing therapy according to a predetermined schedule. Some respondents come to carry out therapy accompanied and accompanied by husband / wife, children, or even by their grandchildren and respondents who do not get family support because such as a distant residence, their children are busy working, or because they have small children so that his wife can not deliver and accompany to the hospital to carry out therapy. Based on observations made at the time of the study with the duration of hemodialysis therapy which is 4-5 hours long, so that most of the respondents’ families only deliver and then pick up the respondent after finishing therapy. Family support is needed not only in escorting and accompanying respondents to carry out therapy according to the schedule, but also very much needed in controlling fluid and dietary patterns of the respondent and providing moral support such as always paying attention so that the respondent is always eager to carry out hemodialysis therapy. Without family support, it is very difficult for kidney failure patients to undergo hemodialysis therapy according to a predetermined schedule. Therefore it is necessary to do counseling on the patient’s family so that the patient’s family understands the importance of family support in the patient’s treatment process so that the patient’s family can provide attention and support in the implementation of hemodialysis therapy and improve the compliance of hemodialysis patient therapy.
4.3 Long Hemodialysis
The results showed that of 23 respondents who had just undergone hemodialysis therapy (<1 year) were not compliant with 39.1% and 60.9% who adhered to the hemodialysis therapy schedule. Whereas of the 24 respondents who had long (1 year) undergone hemodialysis therapy, 8.3% did not comply and 91.7% adhered to the hemodialysis therapy schedule. There is a long association between hemodialysis and compliance with hemodialysis therapy in respondents. Having a long hemodialysis therapy often removes a person's enthusiasm so that it affects one's compliance is undergoing hemodialysis therapy. Patients with adherent kidney failure undergoing hemodialysis therapy are patients with long duration of hemodialysis therapy with less than or equal to 1 year [11]. The results of this study are supported by Manguma research (2014). There is a significant relationship between hemodialysis duration and compliance with hemodialysis therapy, patients undergoing> 4 years are more adherent to hemodialysis therapy [20]. This study is in line with the research of Hadi (2015) about the relationship between the length of undergoing hemodialysis and patient compliance with p = 0.019 <0.05 there is a relationship between hemodialysis and the severity of treatment for patients with kidney failure [22]. Rostanti Research (2016), entitled The Relationship of Family Support with Patient Compliance with Chronic Kidney Failure in Randan Pandan Arang Boyolali, also said that there was a significant relationship between the length of hemodialysis and compliance with hemodialysis therapy, the longer patients undergoing hemodialysis should require families to pay more attention to health patients due to hemodialysis patients will experience a decrease in enthusiasm in carrying out therapy, and the family does not actually decrease their care for family members who suffer from chronic kidney failure. This becomes important because patients with chronic kidney failure have complex problems, one of which is adherence in implementing a diet, where adherence in this diet is a very significant role in determining the health status of patients with chronic kidney failure [23]. Based on observations and interviews with respondents in the hemodialysis room, that the majority of respondents who adhere to hemodialysis therapy according to a predetermined schedule due to the enthusiasm of respondents to maintain body stability, based on interviews with respondents initially did not comply with hemodialysis therapy that was undertaken but the respondent felt a negative impact due to if not compliant therapy such as weakness, swollen body, and tightness, so that in the end, the patient becomes obedient to do hemodialysis therapy. From the results of the study of patients who have the longest hemodialysis up to 40 months, with the risk factors of respondents experiencing chronic kidney failure hypertension, with a good diet, family support and nurses' attitudes and high motivation respondents can carry out hemodialysis therapy according to the schedule and conditions his body is more stable and can improve the quality of his life. It is recommended to doctors and nurses in the hemodialysis room to always provide information and motivation to patients, especially to patients who have just undergone hemodialysis so that they are motivated and increase compliance in carrying out hemodialysis therapy according to a predetermined schedule.

4.3 Knowledge
From the results of the study note that out of 25 respondents with insufficient knowledge 36.0% were not compliant and 64.0% adhered to the hemodialysis therapy schedule. Of the 22 respondents with good knowledge, 9.1% did not comply and 90.9% adhered to the hemodialysis therapy schedule. Knowledge is related to the respondent's compliance with hemodialysis therapy. The level of knowledge of someone undergoing hemodialysis therapy is one of the factors that influence adherence to carry out hemodialysis therapy, knowledge can be obtained from other people or the mass media. Good knowledge such as the patient knows what is kidney failure, what should a kidney failure patient do such as food and beverage regulations that the patient may consume, how many times to undergo therapy, negative effects such as pain and other illnesses that are felt if the patient does not do the rules during duration of therapy, and the patient's medication schedule that will encourage patients with chronic kidney failure to undergo hemodialysis therapy routinely [24]. According to Ismail's research (2012), there is a relationship of knowledge with compliance with hemodialysis therapy, the higher the respondent's knowledge about kidney failure can improve medication adherence in patients because the level of knowledge for patients with kidney failure is very necessary in hemodialysis therapy, so that patients adhere to medication and increase the patient's desire to recover by carrying out routine hemodialysis therapy [25]. This study is in line with Desitasari research (2015), there is a relationship between knowledge and compliance with hemodialysis therapy with a P-value of 0.046 <0.05.26. The Suriya research in 2017 also said that there is a relationship of knowledge with compliance with patients with chronic renal failure following treatment with routine hemodialysis therapy, which is very important to prevent complications [27]. Based on observations and interviews in the hemodialysis room with respondents, that the majority of respondents who have carried out hemodialysis therapy according to a predetermined schedule said they already knew chronic kidney failure is a chronic disease where the kidneys cannot function anymore to remove the remnants of the body's metabolism, so kidney replacement therapy must be done by carrying out hemodialysis therapy. The implementation of hemodialysis therapy according to the schedule is a must because otherwise fluids and toxic substances will accumulate in the body and cause symptoms such as swollen face, swollen body, tightness, and anemia. Based on the respondent characteristic data that most of the male sex and some male patients are not compliant in therapy because of limited knowledge and information about chronic kidney failure and get bored easily doing hemodialysis therapy, besides the education of the majority of respondents graduated from elementary school so the limited knowledge about kidney failure Chronic some respondents only know if treatment is considered to have healed quickly and only feel sick just go to the doctor so that patients do not become disobedient in carrying out hemodialysis therapy. From the interview results, most respondents said that they got information about chronic kidney disease and hemodialysis from the explanation of doctors and nurses in the hemodialysis room and from patients who were also undergoing hemodialysis therapy. Therefore, it is important for doctors and nurses in the hemodialysis room to always provide all information about chronic kidney disease and hemodialysis to all patients and their families to improve the compliance of...
therapeutic hemodialysis patients

5 CONCLUSION
The study concludes that motivation variables have the most influence on patient compliance for hemodialysis therapy according to a predetermined schedule. Furthermore, family support variables, length of hemodialysis and knowledge of patients regarding the therapy undertaken also affect the patient's compliance with hemodialysis therapy according to a predetermined schedule. It is recommended that families try to provide support and foster motivation so that patients with chronic kidney failure can undergo hemodialysis therapy by the provisions to improve the quality of life of patients with chronic kidney failure. Besides, continuous education is provided to patients by health professionals or families so that the patient's knowledge of patients suffering from chronic kidney failure and its treatment can increase the patient's enthusiasm in undergoing treatment.

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