FACTORS RELATED TO QUALITY OF LIFE IN HEMODIALYSIS PATIENTS

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FACTORS RELATED TO QUALITY OF LIFE IN HEMODIALYSIS PATIENTS

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ABSTRACT
Hemodialysis therapy is a long-term therapy in patients with chronic kidney disease that can affect the patient's quality of life. Quality of life is an important indicator that shows the well-being of hemodialysis patients. Identification of factors related to quality of life can help patients and health workers in making decisions regarding health problems. The purpose of this study was to determine the factors associated with the quality of life of hemodialysis patients. This study is a cross-sectional study involving 77 hemodialysis patients at RSUD Madiun. The sampling technique used is purposive sampling technique. Quality of life was assessed by the WHOQOL-Bref which consists of four domains containing 26 statement items. Statistical analysis used linear regression. The average value of quality of life in this study was 58.58 ± 14.27, which means that it is in the category of moderate quality of life. Factors related to the quality of hemodialysis patients were duration of hemodialysis (p=0.00) and living status (p=0.00). The value of R square was 58.7, which means that the variable duration of hemodialysis and living status affected the quality of life of HD patients by 58.7%.. Duration of hemodialysis and living status are factors related to the quality of life of hemodialysis patients.

Keywords: chronic kidney disease; hemodialysis; quality of life

INTRODUCTION
Chronic Kidney Disease (CKD) has been known as a health problem that continues to increase in the world. Globally, it is estimated that the prevalence of CKD is 13.4%. Meanwhile, patients requiring renal replacement therapy are estimated at 7,083 million (Lv & Zhang, 2019). The prevalence of CKD in Indonesia is 19.33% (Riskesdas, 2018). One of the main renal replacement therapies to treat problems in CKD is hemodialysis (Park & Yoo, 2016). The trend of new patients requiring hemodialysis therapy continues to increase in Indonesia, from 30831 new patients in 2017 to 66433 in 2018 (IRR, 2018).

The problem that often arises in patients on hemodialysis is a decrease in quality of life. Hemodialysis can affect all aspects of quality of life such as physiological, psychological, and socio-economic aspects (Zamanian et al., 2018). In fact, improving the quality of life has become one of the important indicators in the outcome of medical treatment (Pedras et al., 2016) Identification of factors related to quality of life can assist health workers in making clinical decisions, especially for vulnerable groups (Kossioris, 2015). Therefore, this study aims to determine the factors associated with the quality of life of hemodialysis patients.

METHODS
This study is a cross-sectional study involving 77 hemodialysis patients at RSUD Madiun. The sampling technique used is purposive sampling technique. The inclusion criteria for this study were patients aged more than 18 years, patients had the ability to hear, speak and respond, these patients were in a state of full awareness and were willing to be respondents. The exclusion criteria of this study were patients who were incomplete in filling out the

questionnaire, had cognitive impairment and patients with cardiac or pulmonary or cerebral complications.

This study uses three instruments : demographic questionnaire, questionnaire, WHOQOL-Bref, and Mini-Cog. Demographic characteristics questionnaire was used to collect data including age, gender, education level, status of residence, and duration of hemodialysis. Mini-Cog is an instrument used for the detection of cognitive disorders. Quality of life was assessed by the WHOQOL-Bref which consists of four domains containing 26 statement items. The WHOQOL-BREF questionnaire has been tested for validity and reliability by previous researchers and it is found that there is a significant relationship between item scores and dimension scores (r = 0.409 – 0.850) and cronbach's score of 0.8756 (Wardani & Dewi, 2020). Statistical analysis using linear regression.

RESULT

Table 1.
Results of Bivariate Analysis of Quality of Life of Hemodialysis Patients (n=77)

Characteristics	F	%	*Mean* ±SD	*P value*
Ages			41,1±9,40	0,725
Gender				0,862
Male	38	49,3	59,15,1±13,63	
Female	39	50,7	58,00±15,05	
Last Education				0,862
Middle education	65	84,4	58,46 ±14,09	
College	12	15,6	59,25 ±12,21	
Occupation				0,933
Work	18	23,4	58,83 ±14,6	
Do not Work and retired	59	76,6	58,51 ±14,29	
Living status				0,00
Live alone	19	24,7	41,53 ± 8,59	
Live with family	58	75,3	64,17 ±10,92	
Duration HD				0,00
Less than 12 months	29	37,7	42,53 ± 8,42	
12-24 months	33	42,9	55,20±9,20	
More than 24 months	15	19,5	63,98 ±7,45	

* significant with $p<0,05$

Table 2. Quality of Life Score of Hemodialysis Patients (n=77)

Quality of Life Domain	Mean ±SD
Physical Health	52,05±10,66
Psychological	53,10±12,19
Social relations	63,55 ±10,06
Environment	67,67 ±10,73
Quality of Life Score	58,58 ±14,27

This study involved 77 hemodialysis patients. Descriptive analysis of respondents characteristics can be seen in table 1. Based on table 1 the average age of respondents is 41.18±9.40 years. Most of the respondents were female (51%), completed school to secondary education (84.4%), had no work and retired status (76.6%), lived with their caring family (75.3%) and underwent hemodialysis for 12-24 months (42.9%). The description of

the quality of life of diabetic ulcer patients can be seen in Table 2. Based on Table 2, the average value of the total quality of life is 58.58 ± 14.27, which means that the respondent's quality of life is in the moderate category. The physical health domain has the lowest average score, which is 52.05±10.66. Meanwhile, the environmental domain has the highest average score, which is 67.67 ± 10.73.

Based on table 1, the variables of age, gender, education level and employment status have p-values respectively 0.752,; 0.862; 0.862; 0.933, which means that there is no relationship between age, gender, education level, and employment status with the quality of life of hemodialysis patients. While the variables of living status and duration of hemodialysis have p-value of 0.00, which means that, there is a significant relationship between living status and duration of hemodialysis with the quality of life of hemodialysis patients. Based on the results of linear regression analysis, it was found that the variable duration of hemodialysis and living status were variables related to the quality of life of hemodialysis patients with p-value: 0.000. The variable of residence status is the variable that has the greatest relationship with the quality of life of hemodialysis patients (B value=16,704). The value of R square is 58.7, which means that the variable duration of hemodialysis and living status affected the quality of life of HD patients by 58.7%.

Table 3.
Factors Related to Quality of Life of Hemodialysis Patients (n=77)

Independent Variable	B	B	*p-value*	95% *Confidence Interval*
Constant	15,906		0,001	6,969-24,843
Duration of hemodialysis	7,365	0,381	0,000*	11,144-22,264
Living status	16,704	0,508	0,000*	4,098-10,263

* Significant with $p<0,05$; R *square* 58.7 %

DISCUSSION

The results showed that the average quality of life for hemodialysis patients was 58.58 ± 14.27, which means that the average quality of life for hemodialysis patients in this study was in the medium category. Fadillah reported similar results where most hemodialysis patients had a quality of life in the moderate category (Fadlilah, 2019). Quality of life is defined as perception of his living conditions based on the goals and expectations of each person (Zhou et al., 2017). Assessment of quality of life in hemodialysis patients must pay attention to the cultural context and value system adopted, the relationship with living standards, expectations and pleasures and their concerns.

The quality of life domain analysis showed that the physical health domain had the lowest score (52.05±10.66). The physical domain consists of questions related to pain, drug dependence, energy availability, mobility, sleep satisfaction and ability to carry out daily activities (WHO, 1996). Hemodialysis can cause physical limitations such as fatigue, weakness caused by lack of energy due to dietary restrictions and fluid regulation. During the process of undergoing hemodialysis, many patients complain of dizziness, pain, and weakness (Reza, 2016). The environmental domain has the highest average in this study of 67.67 ± 10.73. The environmental domain consists of questions related to security, a supportive physical environment, sources of funds, availability of information, recreational opportunities and access and transportation to health services (WHO, 1996). Based on the analysis of the characteristics of the respondents, most of the respondents live with caring families. This

allows families to help hemodialysis patients meet their daily needs, assist in getting access to transportation to health services, and provide a sense of security to hemodialysis patients.

The results of statistical analysis showed that duration of hemodialysis and living status had a significant relationship with quality of life. Several previous studies have also shown similar results where the longer the patient undergoes hemodialysis the better the patient's quality of life (Fadlilah, 2019; Pan et al., 2018; Sprague et al., 2018; Yusop et al., 2013; Zhou et al., 2017). Patients who have been on hemodialysis for a long time have a thorough understanding of their disease, the therapeutic program obtained, and they have accepted that they are sick and must undergo hemodialysis therapy for the rest of their lives (Zhou et al., 2017)

Living status is a variable associated with the quality of life of hemodialysis patients. Patients who live with family members who care for them have a higher quality of life than patients who live alone. Fadilah also reported the same results where hemodialysis patients who lived with family members had a better quality of life compared to patients who lived alone. The existence of the family is an important factor for individuals when facing health problems. The family will play a role in the nursing function so that patients achieve optimal health conditions. Hemodialysis therapy is a long-term therapy that requires psychological, physical and financial assistance from family members (Ayu et al., 2018).

Based on the results of linear regression analysis, it was found that living status was the factor most related to the quality of life of patients on hemodialysis. Living with other caring family members allow family members to assist with nursing functions needed by patients in daily life and provide family support. Family support is the perception of hemodialysis patients about attitudes, actions and family acceptance of themselves during hemodialysis. The forms of support that can be given are emotional, reward, informational, and instrumental support (Fadlilah, 2019). Family support can also be in the form of a presence that provides an emotional response and influences the behavior and acceptance of hemodialysis patients to their current condition (Sukriswati, 2016). The existence of the family is a support for patients facing health problems. Hemodialysis therapy is a lifelong therapy. The family plays a role in providing physical, psychological, social and financial support during the hemodialysis therapy process (Ayu et al., 2018).

CONCLUSION

Duration of hemodialysis and living status are factors related to the quality of life of hemodialysis patients.

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