



PROCEEDINGS


The 3rd International Conference on Sustainable Innovation 2019 (ICoSI)



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- ✓ ISETH (International Symposium on Engineering, Technology, and Health Sciences)
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Quality of Life in Hemodialysis Patients with Chronic Kidney Disease

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Abstract -- Chronic kidney disease (CKD) and its treatment have an important part in forming the QoL of patients who have hemodialysis. As a result, CKD affects the quality of life from the physical, psychological, social and environmental dimensions. A descriptive analytic study was conducted in the hemodialysis unit of the RSUD Dr. Soegiri Lamongan. A total of 88 CKD's patients with hemodialysis were studied. Patient's QOL was rated by WHOQOL-BREF questionnaires. The results showed that in the domain of quality of life, the low domain was physical with an average of 20 and the high domain was social with an average of 10. While most respondents with high quality of life as many as 78 people (88.6%) and a small respondent with medium quality of life as many as 10 people (11.4%). The results of this study can be concluded that most respondents have a high quality of life. However, the physical condition of CKD patients has significant problems. Thus, given the information by the hospital to overcome the physical disturbances that occur in CKD patients, so that his quality of life improved

Keywords—Chronic Kidney Disease, Quality of Life, Hemodialysis

INTRODUCTION

Chronic Kidney Disease (CKD) are among the main health problems around the world that influence quality of life and patient's lifestyle [1]. Quality of life is one of the main indicators for general well-beings [2]. Quality of life is turn out to be a trusty predictor for short and long term mortality in many pathological conditions [3], such as CKD [4].

End stage of renal disease patients in undergoing hemodialysis usually think that they are free to intake of water and food. Because after hemodialysis their health will be better with frequent visits to the center of dialysis and had a needle prick. They didn't understand that the progress of disease and complications related to their bad habits. Two study findings show that about half of patient's hemodialysis has not changed in the quality of life, while a quarter reported increase and the rest has experienced a fall in the quality of life [5], [6].

Chronic Kidney Disease is the important morbidity and mortality around the world. According to the study Global Burden of Disease (2013), CKD contributed 956.200 death around the world that rises around 134 % of 1990 [7]. Indonesia is a country with a high level of CKD sufferers, the Indonesian Nephrology Association (PERNEFRI) estimates that there are 70,000 people with CKD in Indonesia. This number will continue to increase by around

10% every year [8]. While based on data from the 2013 Basic Health Research (Riskesdas), the prevalence of CKD in Indonesia was 0.2% from the total diagnosis [9]. Based on the initial survey conducted by researchers at the RSUD Dr. Soegiri Lamongan obtained a total of 455 patients visiting CKD in 2015.

Assessment of health-related quality of life as a prediction indicators from the disease and hundreds of thousands that can be used in assessing the effectiveness of intervention therapy and survival of patients [10] [11]. The act of hemodialysis consisting of the procedure complex for patients who do visited to the hospital or center dialysis that it is often so have caused the changes substantial in the manner of normal life patients CKD [12] [13]. The purpose of this research is to explore the quality of life are patients CKD undergoing hemodialysis.

METHODS

Design and Patients

This descriptive analytic stud was conducted Maret 2017 in hemodialysis unit of the RSUD Dr. Soegiri, Lamongan city, Indonesia. The population on this study were all patient diagnosed CKD undergoing hemodialysis. The sampling method in this study was conducted using total sampling technique. A total of 88 patients CKD with hemodialysis were studied.

Instrument

Quality of Life (QoL) was measured using WHOQOL-BREF questionnaires. This has fourth domain, namely physical, phsicology, social relationship and environment. Physical domain has seven item question, phsicology domain has six item question, social relationship domain has three item question, and environment domain has eight item question [14]. In addition there are also two additional questions at the beginning, namely about feelings about quality of life and feelings about health. Total questions are 26 item, each item questions are scored from 5 to 1.

Statistical Analysis

The data obtained were analyzed descriptively and quantitatively. Data analysis is done with assistance SPSS statistical software version 22.

RESULT AND ANALYSIS

Result

The highest average quality of life score is in the social domain of 10 with a minimum value of 6 as many as 2

respondents and a maximum value of 14 as many as 2 respondents. And the lowest average quality of life score is in the physical domain of 20 with a minimum value of 12 as many as 2 respondents and a maximum value of 27 by 2 respondents (Table 2). The majority of respondents with a high quality of life were 78 people (88.6%), and a small proportion of respondents with moderate quality of life were 10 people (11.4%) (Table 3).

Table 1. Respondent Characteristic

Respondent Characteristic	Frequency	Percentage (%)
Age		
20-30 years old	6	6,8
31-40 years old	10	11,4
41-50 years old	35	39,8
51-60 years old	37	42,0
Gender		
Male	45	51,1
Female	43	48,9
Educational Degree		
Didn't school	3	3,4
Elementary	28	31,8
Junior High School	19	21,6
Senior High School	22	25,0
Bachelor	16	18,2
Occupational Distribution		
No Job	26	29,5
Entrepreneur	21	23,9
Government employees	14	15,9
Farmer	27	30,7

Table 2. The quality of life of patients CKD undergoing hemodialysis at RSUD Dr. Soegiri Lamongan based on the Domain in WHOQOL-BREF Questionnaires

Domain QoL	Score	Mean	Value	
			Min.	Max.
Physical	35	20	12	27
Environment	40	26	14	40
Psychological	30	12	7	27
Social	25	10	6	14

Table 3. The Level of quality of life of patients CKD undergoing hemodialysis at RSUD Dr. Soegiri Lamongan

QoL	Frequency	Percentage (%)
Low	0	0
Moderate	10	11,4
High	78	88,6
Total	88	100

Analysis

The kidneys function is to regulate the balance of water in the body, regulate the concentration of salt in the blood, and balance the acid-base blood, and excretion of waste materials and excess salt. If the kidneys fail to carry out their functions, the patient needs immediate treatment. The situation in which the kidneys gradually begin to not function properly is also called Chronic Kidney Disease (CKD) [15].

According to the Kidney Disease Outcome Quality Initiative recommends that there are 4 stage of CKD based on the rate of decrease in Glomerular Filtration Rate (LFG). 1st Stage: Kidneys abnormalities characterized by persistent albumin and normal LFG (>90 ml/minute/1.73 m2). 2nd Stage: Kidney abnormalities with persistent

albumin and LFG between 60-89 mL/minute/1.73 m2). 3rd Stage: kidney abnormalities with LFG between 30-59 mL/minute/1.73 m2), Stage 4: kidney abnormalities with LFG between 15-29mL/ minute/1.73 m2) Stage 5: kidney abnormalities with LFG <15 mL/minute/1.73 m2 or terminal renal failure [16].

CKD's patients who experience chronic kidney failure will undergo long-term hemodialysis. Hemodialysis is a procedure that the blood is removed from the patient's body and circulates in a dialiser. The frequency of hemodialysis varies depend on the stage of CKD. Average the patient undergoes hemodialysis are three times a week, while the duration of the implementation of hemodialysis is at least three to four hours every once hemodialysis [17].

CKD patients was over 40 years old with the highest number (42%) in the age range of 51-60 years old. Basically CKD can occur at all ages, but higher the age, the higher risk of systemic diseases. One of which is diabetes mellitus and hypertension which is the most common cause of CKD. Nonetheless, there are still CKD patients under the age of 40 with varying causes such as taking steroids for a long time, kidney inflammation or other kidney disease, and systemic lupus erytomatosus (SLE).

Age influences a person's perspective on life, future and decision making. Patients in productive age feel more motivated to recover because they have high life expectancy and are the most important member of role for family's income. Elderly patients tend to leave decisions to their immediate family. This will affect how patients seek health services in order to correct their physical complaints. Their gender is almost balanced between men and women with a percentage of 51.1% and 48.9%. This shows that CKD can occur in both men and women. Although in diseases that cause CKD (DM and Hypertension) have a tendency to occur in men, but in elderly the risk of this disease will increase in both men and women because a decrease in cell function [18].

The most (31.8%) recent education in CKD patients was elementary school. From these data indicate that they have a low level of education. The level of education plays an important role in determining a person's health status. Low education levels tend to have a low level of knowledge. Patients with chronic diseases have considerable challenges in managing clinical manifestations that appear as long as they live. Management of chronic diseases requires good knowledge and abilities so that they can improve their quality of life.

Education also influences how patients make prevention so that the prognosis of the disease does not get worse. A high level of education tends to be easier to understand information about the disease and its management. While a low level of education can result in someone having low knowledge about his health. This can worsen the physical condition of someone who is sick. Patients with higher education have broader knowledge, so that patients can control themselves in overcoming problems, have high self-confidence, experience, and have the right estimates in dealing with events, and easy to understand about what is recommended by health workers.

Most (30.7%) of them are farmers, but quite a lot (29.5%) of them do not work. A person's work indirectly can lead to an unhealthy lifestyle. Stress, fatigue, consumption of supplement drinks, consumption of herbs and dangerous drugs, foods containing preservatives, and lack of drinking water can be a trigger factor for various kidney problems. For example, that often occurs in society is the habit of drivers who consume supplement drinks to maintain energy. Consumption of these drinks for a long time will cause damage to the kidneys. In addition, consumption of herbs and drugs containing steroids without control is also a cause of CKD.

The lowest quality of life domain is the physical domain because during hemodialysis the respondent feels physical weakness that can occur due to anemia. Anemia is a cause of decreased physical function and mental disorders in patients CKD. Research shows that efforts to cure anemia will improve cognitive function, sexual function, general well-being, and quality of life [19]. Anemia that occurs in patients CKD undergoing hemodialysis can cause a decrease in quality of life and increase mortality, depressed immunity, reduced exercise capacity due to lack of energy, and reduced cognitive abilities [20]. Finklestein et al. conducted a study of the relationship between Hb levels and quality of life and found that Hb levels were related to quality of life. In this study also found that an increase in Hb levels can significantly improve the quality of life dimensions of physical health and health [21].

While the highest quality of life domain is the domain of social relations caused by chronicles and old according to social relations, respondents are already quite good because they are able to adjust to the social domain quite high. In addition, with good support in terms of family, friends, finance and the environment improve the quality of life for patients CKD [22]. According to Smeltzer & Bare, family support is part of social relations in providing support or help and assistance to family members who are supporting HD [18]. Germin et.al, states that patients with long-term HD more than one year will have lower physical and social functioning than less than one year [23].

The quality of life of patients as low make therapy correctly. Half of the patient's hemodialysis tending to fail to comply with the intervention [24]. Health professional would have had to develop intervention individually to boost compliance patients against regimen the treatment of cases decisions are made by. The quality of life of that it is more highly make patients are not the face of difficulties with their families or a social environment. According to Barnett et al., CKD affects both patients and their families due to the extensive lifestyle changes as well as fluid and dietary restrictions [25].

World Health Organization (WHO) defines quality of life as the individual perception about their position in life in the context of culture and value system and related to the purpose, hope, standard and their concern in their live [14]. CKD's patients undergoing dialysis are more sensitive to infections because of general frailty and depression in immunologic system and signs and symptoms of infection can be prevented by drug therapy [26]. Poor general health conditions are often associated with poor quality of life [27].

CKD can affect the quality of life of patients which can be observed in the social, environmental, physical, and psychological domains. the severity of the symptoms and the duration of the disease make it important to evaluate patient's quality of life [28].

QoL in CKD is an important thing that needs to be managed. Prolong survival of patients CKD is an important intervention. It has equal importance with given toward maintain of QOL [28]. QoL assessment in CKD's patients has become more important. This is to evaluate the influence of the disease and the renal replacement therapy they needed. QoL in CKD's patients with dialysis overall had low scores in all domains. Age, gender, level of education, employment status, and duration of disease diagnosed was affected domains of QoL [29],[30].

CONCLUSION AND RECOMMENDATION

Conclusion

The results of this study can be concluded that most respondents have a high quality of life. However, the physical condition of CKD patients have significant problems. Thus, given the information by the hospital to overcome the physical disturbances that occur in CKD patients, so that his quality of life improved.

Recommendation

Management of CKD must include QoL assessment and management. To increase kidney function is ckd patients with renal replacement therapy have to consider the needs and expectations. individual patientsIn addition, patients receiving hemodialysis action must be received psychological treatment, especially those who show, emotional problems to achieve better results in therapy and improve the quality of their lives. Family support may be important in improving the quality of life of CKD patients undergoing hemodialysis therapy

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REFERENCES

- [1] Ghiasi, B., Sarokhani, D., Dehkordi, A. H., Sayehmiri, K., & Heidari, M. H. Quality of Life of patients with chronic kidney disease in Iran: Systematic Review and Meta-analysis. *Indian journal of palliative care*. 2018;24(1), 104–111.
- [2] Kendrick, T. et al. Routine use of patient reported outcome measures (PROMs) for improving treatment of common mental health disorders in adults. *The Cochrane database of systematic reviews* 7; 2016.
- [3] Diouf, M. et al. Could baseline health-related quality of life (QoL) predict overall survival in metastatic colorectal cancer? The results of the GERCOR OPTIMOX 1 study. *Health and quality of life outcomes*. 2014: 12-69.
- [4] Porter, A. C. et al. Predictors and Outcomes of Health-Related Quality of Life in Adults with

- CKD. *Clinical journal of the American Society of Nephrology: CJASN*. 2016;11, 1154–1162.
- [5] Liebman, S., Li, N. C. & Lacson, E. Change in quality of life and one-year mortality risk in maintenance dialysis patients. *Quality of life research: an international journal of quality of life aspects of treatment, care and rehabilitation*. 2016;25, 2295–2306.
- [6] Perl, J. et al. Association between changes in quality of life and mortality in hemodialysis patients: results from the DOPPS. *Nephrology, dialysis, transplantation: official publication of the European Dialysis and Transplant Association - European Renal Association*; 2016.
- [7] Naghavi M, Wang H, Lozano R, et al. GBD 2013 Mortality and Causes of Death Collaborators. Global, regional, and national age-sex specific all-cause and cause-specific mortality for 240 causes of death, 1990–2013: a systematic analysis for the Global Burden of Disease Study 2013. *Lancet*. 2015;.385(9963):117–171.
- [8] PERNEFRI (Perhimpunan Nefrologi Indonesia). *Naskah Lengkap : Simposium Peningkatan Pelayanan Hemodialisis, Penyakit Ginjal dan Aplikasi Indonesian Renal Registry Joglosemar 2012*. PERNEFRI. Yogyakarta; 2013.
- [9] Kemenkes RI. *Riset Kesehatan Dasar; RISKESDAS*. Jakarta: Balitbang Kemenkes RI; 2013.
- [10] Unruh ML, Hess R. Assessment of health-related quality of life among patients with chronic kidney disease. *Adv Chronic Kidney Dis*. 2007;14(4): 345-352.
- [11] Kaufman SE. The increasing importance of quality of life research. *Clin Res*. 2001;1: 18-22.
- [12] Avramovic M, Stefanovic V. Health-related quality of life in different stages of renal failure. *Artif Organs*. 2012;36(7):581-589.
- [13] Landreneau K, Lee K, Landreneau MD. Quality of life in patients undergoing hemodialysis and renal transplantation - a metaanalytic review. *Nephrol Nurs J*. 2010;37(1): 37-44.
- [14] World Health Organization. *The World Health Organization Quality of Life (WHOQOL)* Geneva, Switzerland: World Health Organization; 1997.
- [15] Kazama, et al. The Risk of Gallbladder Stone Formation Is Increased in Patients with Predialysis Chronic Kidney Disease but Not Undergoing Chronic Hemodialysis therapy. *Nephron Clin Pract*. 2009;111.
- [16] Parwanti, Pebriyana. *Hubungan Dukungan Keluarga Dengan Kualitas Hidup Pasien Hemodialisa Di RS PKU Muhammadiyah Yogyakarta unit II*; 2015.
- [17] Brunner & Suddarth. *Buku Ajar Keperawatan Medikal Bedah Edisi 8 volume 2*. Jakarta : EGC; 2013.
- [18] Smeltzer, S. C., & Bare B. G. *Buku Ajar Keperawatan Medikal Bedah Brunner & Suddarth (Edisi 8 Volume 1)*. Jakarta: EGC; 2009.
- [19] Drüeke TB, Locatelli F, Clyne N, Eckardt KU, Macdougall IC, Tsakiris D., et al. Normalization of Hemoglobin Level in Patients with Chronic Kidney Disease and Anemia. *N Engl J Med*. 2006; 355(20): 2071-84.
- [20] Clement FM, Klarenbach S, Tonelli M et al. The impact of selecting high hemoglobin target level on health related quality of life for patients with chronic kidney disease. *Arch Intern Med*. 2009; 16(9):1104-1112.
- [21] Finkelstein FO, Story K, Firanek C, et al. Health-related quality of life and hemoglobin levels in chronic kidney disease patients. *Clin J Am Soc Nephrol*. 2009;4:33-38.
- [22] Nurchayati, S. *Analisa faktor-faktor yang berhubungan dengan kualitas hidup pasien penyakit ginjal kronik yang menjalani hemodialisa di Rumah Sakit Islam Fatmawati Cilacap dan Rumah Sakit Umum Daerah Banyumas*. Tesis, Universitas Indonesia, Depok; 2010.
- [23] Germin-Petrovic D, Devcic I, Lesac A, Mandic M, Soldatic M, Vezmar D. Health related quality of life in the patients on maintenance hemodialysis: the analysis of demographic and clinical factors. *Coll Antropol*. 2011;3:687-93.
- [24] Kutner NG. Improving compliance in dialysis patients: does anything work? *Semin Dial*. 2001;14(5): 324-327.
- [25] Barnett T, Li Yoong T, Pinikahana J, Si-Yen T. Fluids compliance among patients having hemodialysis: can an educational program make a difference?. *J Adv Nurs*. 2008;61(3): 300-306
- [26] Hamissi J, Porsamimi J, Naseh MR, Mosalaei S. Oral hygiene and periodontal status of hemodialyzed patients with chronic renal failure in Qazvin, Iran. *East Afr J Public Health*. 2009; 6(1):108–111
- [27] Feroze U, Noori N, Kovesdy CP, Molnar MZ, Martin DJ, Reina Patton A, Benner D, Bross R, Norris KC, Kopple JD, Kalantar-Zadeh K. Quality-of-life and mortality in hemodialysis patients: roles of race and nutritional status. *Clin J Am Soc Nephrol*. 2011;6(5):1100–1111
- [28] Beiber, SD & Himmelfarb, J. *Hemodialysis*. In *Schrier's Disease of the Kidney*. 9th Edition. Editors Coffman, T.M., Falk, R.J., Molitoris, B.A., Neilson, E.C., Schrier, R.W. Philadelphia: Lippincott Williams & Wilkins; 2013. P. 473-505.
- [29] Cukor D, Ver Halen N, Fruchter Y, Kimmel PL. Psychosocial issues in chronic kidney disease patients. *Chronic Renal Disease*. 2014: 229–236.
- [30] Ferreira RC, da Silva Filho CR. Quality of life of chronic renal patients on hemodialysis in Marília, SP, Brazil. *J Bras Nefrol*. 2011;33(2):129–135