Assessment of Health-Related Quality of Life with Patient Chronic Kidney Disease

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Artikel Penelitian

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Abstract: *Measuring the quality of life can be used as a reference for the success of an action or therapy as well as initial data in formulating the right action for the patient. This study aims to provide an overview of the quality of life of patients with chronic renal failure who seek treatment at the Hasanuddin University hospital. The research design used was an observational cross-sectional design with data collection carried out by filling out a questionnaire prospectively. The subjects of the study were chronic renal failure patients undergoing hemodialysis who met the inclusion criteria and were selected using a non-random sampling technique by means of total sampling. The patient's quality of life was measured using the Kidney Disease Quality of Life Short Form (KDQOL-SF™) Indonesian version 1.3 questionnaire. A total of 30 patients were willing to participate in this study. The results of the study on 30 patients with chronic renal failure, there were 7 out of 19 scale/item having a not good, namely burden of kidney disease, work status, sleep, physical functioning, role-physical, pain, and general health. The average value of 19 scale/item shows an average score of> 59.37, which is 63.86 which belongs to the good quality of life category.*

Keywords: *health related quality of life, chronic kidney disease, KDQoL*

Introduction

The prevalence of Chronic Kidney Disease (CKD) is increasing globally, though regional disparities exist. It is increasing worldwide at an annual growth rate of 8% [1]. Epidemiologic studies have shown that the incidence of kidney diseases is higher in the developing countries than in the developed world. Based on the results of the Basic Health Research (RISKESDAS) of the Ministry of Health of the Republic of Indonesia in 2013, the prevalence of chronic kidney failure based on a doctor's diagnosis in Indonesia is 0.2%. The highest prevalence was in Central Sulawesi at 0.5%, followed by Aceh, Gorontalo, and North Sulawesi with 0.4% each. Meanwhile East Nusa Tenggara, South Sulawesi, Lampung, West Java, Central Java, DI Yogyakarta, and East Java each had 0.3%. North Sumatra Province at 0.2% [2].

Chronic kidney disease (CKD) causes sufferers to be unable to get rid of body fluids and results from the rest of the body's metabolism. If CKD is too severe, then the patient must undergo hemodialysis therapy (dialysis) at least twice a week (Suhardjono et al., 2001). Hemodialysis

(HD) is a kidney replacement therapy that uses a special tool with the aim of removing uremic toxins and regulating body electrolyte fluids (KEMENKES RI, 2010). In Indonesia, hemodialysis is performed 3 times a week with a duration of 4-5 hours of dialysis. [3]. Another problem that a patient has to deal with is like a problem financial problems, difficulty keeping a job, missing sexual mistakes, depression, and fear of death. A planned lifestyle relates to therapeutic hemodialysis therapy (eg implementation of hemodialysis therapy 2-3 times a week for 3-4 hours) and keeps the fluid of the fluid taking the spirit alive patient. This will affect the quality of life of CKD patients [4].

Quality of life becomes an important measure after patients undergo renal replacement therapy such as hemodialysis or a kidney transplant. The quality of life of patients undergoing hemodialysis is decreasing because the patient not only faces health problems associated with chronic kidney disease but is also associated with lifelong therapy, as a result, the quality of life for patients undergoing hemodialysis is lower than the average individual. HD therapy will also affect the patient's psychological state. Patients will

experience disturbances in thinking and concentration processes as well as disturbances in social relations. All of these conditions will cause a decrease in the quality of life of CKD patients who undergo HD therapy [5]. In particular, patients will experience physical suffering, limitations in daily activities [5].

In addition, quality of life measurement can also be a reference for an action/intervention or therapy. In addition, data on quality of life can also be preliminary data for consideration of formulating appropriate interventions/actions for patients [6]. There are several questionnaires used to measure the quality of life, one of which is the Kidney Disease Quality of Life Short Form (KDQOL-SF™) questionnaire which has been recognized for its benefits in the medical world. KDQOL SF is a measure of the overall quality of life of patients with renal failure both physically, mentally, and socially [7].

Hasanuddin University Hospital, which is one of the health service facilities as a place of referral for chronic kidney failure patients and provides hemodialysis services. Based on the results of the initial survey conducted at the Hasanuddin University Hospital, it was stated that the number of patients undergoing hemodialysis in October 2017 was 48 patients. This study aims to see an overview of the quality of life of patients with kidney failure who seek treatment at Hasanuddin University Hospital using a kidney disease-specific tool (Kidney Disease Quality of Life (KDQOL-SF™).

Methods

The design of this study was an observational cross-sectional design with data collection carried out by filling out a questionnaire prospectively. This research has been submitted to the Health Research Ethics Committee of the Faculty of Medicine, Muslim University of Indonesia, and has been approved with the ethical approval recommendation number 996 / KEPK-UMI / XI / 2017.

The subjects in this study were chronic renal failure patients undergoing hemodialysis who met the inclusion criteria and were selected using nonrandom sampling techniques by means of total sampling. The inclusion criteria in this study were: patients undergoing routine hemodialysis 2-3 times a week, aged 20-64 years, willing to participate in the study by signing an informed consent form. The exclusion criteria in this study were that the patient control schedule was not fixed, the patient's medical record data was incomplete and the patient was unconscious.

Materials and data sources used in this study are primary data obtained by filling out questionnaires by patients and secondary data obtained from patient medical records. The data collection process was carried out by interviewing patients and using a tool in the form of a questionnaire filled out by patients who were willing to become respondents. The research tools used were the informed consent sheet, the patient's personal datasheet, and Kidney Disease Quality of Life Short Form (KDQOL-SF™) Indonesian version 1.3 questionnaire. The collected data is processed by checking the completeness of the data, then the analysis of the answers to the questionnaire consisting of 24 questions is given a score, then the score is converted into numbers 0-100. Assessment of quality of life, in general, is an average of all aspects and is interpreted according to a scale: Quality of life is good (mean score of 19 scale KDQOL-SF 1.3> 59.37), and quality of life is poor (mean score of 19 scale KDQOL -SF 1.3 ≤ 59.37).

Result and Discussion

A total of 30 patients who met the inclusion criteria were willing to participate in this study. Patient sociodemographic data can be seen in **Table 1**.

Gender was suggested as a non-modifiable predictor of the risk of initiation and progression of chronic kidney disease. The incidence of terminal renal failure has been reported to be greater in men. Female gender was associated with slower progression of chronic kidney disease, better kidney protection, and better patient clinical outcome [8]. Increasing a person's age has an impact on decreasing body functions so that they are more susceptible to disease. Increasing patient age is also related to the prognosis of a disease and life expectancy. Patients over 55 years of age are more likely to develop complications that can aggravate kidney function to work compared to patients under 40 years of age.

Table 1. Sociodemographic characteristics

Characteristics	n	Percentage (%) (%)
Gender		
Female	10	33,33
Male	20	66,67
Age		
18 – 44 years	14	46,67
45 – 64 years	16	53,33
Level of last education		
Elementary school	2	6,67
Junior and high school	13	43,33
University	15	50
Occupation		
Not working/retired	13	43,33
Working	17	56,67
Long suffered		
≤8 months	5	16,67
>8 months	25	83,33

This is in accordance with research conducted by Gweon et all (2019) which shows that the majority of respondents are from college, the higher the level of education of a person, the awareness of the importance of health and treatment of the health problems they face will also be more likely to think positively [9]. The latest education status also affects the economic and social resources achieved, so that a paradigm appears that a low level of education results in an individual having low knowledge of their own health and increases the risk of chronic kidney disease [7]. Patient characteristics based on the length of time undergoing hemodialysis were classified as less than 8 months and 8 months or more, which refers to the study of Anees, et al (2011) [10]. The results of the long-suffering characteristics> 8 months were 25 patients (83.33%) and <8 months were 5 patients (16.67%). The results of measuring the quality of life in this study can be seen in **Table 2**.

Our study shows a clear decrement in quality of life associated with CKD. The finding is consistent with previous studies that focused on those with established disease regardless of the instruments used to measure quality of life [11-13]. In **Table 2** it shows the total mean final score of 12 scale (item) of quality of life for CKD patients in Hasanuddin University hospital showing that the category of good quality of life and the final

score of 7 scale (item) indicates that the category not good quality of life. 7 scale (item) show poor quality categories, namely burden of kidney disease, work status, sleep, physical functioning, role-physical, pain, and general health.

Category not good quality of life was also shown in sleep quality and sexual dysfunction. CKD patients in this study experienced sleep disturbances at night. Changes in the fulfillment of needs for rest and sleep experienced by hemodialysis patients. Sleep cannot be fulfilled due to a reason, namely, discomfort, restlessness during sleep and not knowing what feelings cause him to not sleep. Sexual dysfunction as a result of conditions that are not possible for strength and body condition is not healthy. In hemodialysis patients who experience sexual dysfunction disorders, sexual dysfunction occurs in end-stage renal failure patients with hemodialysis, these patients generally receive antidepressant therapy, where these drugs can have the effect of reducing libido and ejaculation in men [14].

According to Gonçalves et all (2015), the scale (item) of not good quality of life is also shown in the role / emotional limitations, in addition to being anxious because of the amount of time being reduced, shortening the time for work and activities, also not being as careful/thorough in completing their work as before [15].

Table 2. Quality of life measurement results

Scale (item)	Average±SD	Category
Symptoms	71,78 ± 10,17	Good
Effects of kidney disease	68,33 ± 10,24	Good
Burden of kidney disease	59,21 ±17,53	Not good
Work status	59,21 ± 28,33	Not good
Cognitive function	73,56 ± 17,55	Good
Quality of social interaction	78,39 ±10,45	Good
Sexual function	62,00 ± 25,37	Good
Sleep	59,36 ± 12,00	Not good
Social support	66,67 ± 10,72	Good
Dialysis staff encouragement	82,92 ± 10,63	Good
Patient satisfaction	80,56 ± 12,44	Good
Physical functioning	58,00 ±18,32	Not good
Role-physical	27,50 ± 25,72	Not good
Pain	57,92 ± 15,33	Not good
General health	52,40 ± 10,93	Not good
Emotional well-being	61,11 ± 24,89	Good
Role-emotional	72,27 ± 8,72	Good
Social function	71,33 ± 20,51	Good
Energy/fatigue	61,67 ± 10,93	Good
Average	63,86	

Patients with kidney failure undergoing hemodialysis experience symptoms such as tingling limbs, muscle aches, fatigue, and disruption in certain activities. The decreased physical quality was expressed by the patient since being sick and undergoing hemodialysis therapy due to physical weakness so that all activities decreased and were limited according to the conditions. This is in accordance with research conducted by Mardyaningsih (2014) which states that physical weakness will affect participant activities so that participants will limit their energy according to circumstances [14].

Conclusion

There are 7 scale 9 item that have a not good quality of life category, namely burden of kidney disease, work status, sleep, physical functioning, role-physical, pain, and general health. The average value of 19 scale/item shows an average score of> 59.37, which is 63.86 which belongs to the good quality of life category.

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