


QUALITY OF LIFE OF CHRONIC RENAL FAILURE PATIENTS UNDERGOING HEMODIALYSIS THERAPY

Endrat Kartiko Utomo ¹, Totok Wahyudi ²

Program Studi Sarjana Keperawatan, Universitas Duta Bangsa Surakarta

Email: endrat_kartiko@udb.ac.id¹

ARTICLE INFO	ABSTRACT
Received: Revised: Approved:	<i>Background: Changes in lifestyle associated with the complex treatment of hemodialysis, which ultimately affects the mental or psychological and social of the patient. Changes in physical, psychological functioning, lack of mobility, work problems, unemployment in activities, fatigue and fear of future challenges are problems faced by people with chronic renal failure undergoing hemodialysis therapy. i Objective: To determine the quality of life in chronic renal failure patients undergoing hemodialysis therapy. Method: Type of descriptive research using Analytical Survey with a total sample of 53 respondents who were guided by purposive sampling techniques and quality of life instruments measured with KDQOL-SF 3.6. Results: Average quality of life symptom/problem list 66.90, effect kidney disease 65.68, burden kidney disease 50.47, SF-12 Physical Health 40.69, and SF-12 Mental Health 50.20. Conclusion: The role of families and hospitals is able to improve and maintain the quality of life of chronic renal failure patients undergoing hemodialysis therapy</i>
KEYWORDS	Quality of Life, Chronic Renal Failure
	This work is licensed under a Creative Commons Attribution-ShareAlike 4.0 International

INTRODUCTION

Chronic diseases are considered the main threat to mankind. The problem becomes serious after the patient is diagnosed for the first time, and continues when actions whose purpose is to prolong his real life span actually increase the burden of the disease itself (Zimbudzi et al., 2016). The problem regarding the quality of life of chronic renal failure patients undergoing hemodialysis therapy treatment, this is due to the patient experiencing lifestyle changes associated with complex hemodialysis treatment, which ultimately affects the patient's mental or psychological and social (Dehvan et al., 2018). Low changes in physical and psychological functioning lead to a high risk of death, dependence on health services and low quality of life (Shirazian et al., 2017). Low self-

esteem, self-isolation, lack of mobility, work problems, unemployment in activities, fatigue and fear of future challenges are problems faced by people with chronic renal failure undergoing hemodialysis therapy (Esmaili et al., 2018).

Although the World Health Organization (WHO) emphasizes physical, psychological, social and mental health as a treatment goal by advancing technology in hemodialysis treatment to help improve the quality of life, the fact is that the quality of life of sufferers is still very low, resulting in high rates of morbidity and mortality (Abdelghany et al., 2016) (Kanwal & Afzal, 2017). Pernefri (Indonesian Nephrology Association) survey data in 2017 there were 77. 892 active sufferers, 30. 831 new sufferers (Indonesian Renal Registry, 2017)

In Central Java province, there are 2488 new patients undergoing hemodialysis and are among the 3 largest proportions (Ministry of Health, 2017). Meanwhile, in Surakarta City alone there are 224 new sufferers of chronic kidney failure (Surakarta Health Office, 2018). Improving the quality of life can be done with continuous hemodialysis therapy, following medical prescriptions, fluid restriction and a special diet (Esmaili et al., 2018). However, in fact there are still factors that affect the quality of life of patients, both from the characteristics of the patient, hemodialysis therapy, functional status and health, psychological status, and family / group support (Maksum, 2015) (Ebrahimi et al., 2015) (Chong & Unruh, 2017) (Relawati et al., 2015).

Based on these conditions, the author is interested in conducting research on the quality of life of patients undergoing hemodialysis therapy at Pandan Arang Boyolali Hospital. So it is expected that the results of this research provide the most important information about the quality of life

RESEARCH METHOD

This type of research uses analytical surveys with a Cross Sectional Study approach. The total population in the study was 114 patients with a total sample of 53 respondents, Sampling Technique through purposive sampling, with inclusion criteria: Patients aged 18-65 years, patients who underwent hemodialysis therapy for more than 3 months, received hemodialysis therapy 2 times a week, patients were willing to be respondents, patients can read and write and patient is cooperative. Exclusion criteria: patients with an unconscious state and critical patients.

The instrument used in this study used a demographic data sheet to determine the characteristics of respondents and the KDQOL-SF 3.6 questionnaire sheet used to determine the quality of life of chronic renal failure patients has been tested for validity and reliability. Test the analysis using an independent t-test or one-way ANOVA and a logistic regression test. This research passed the ethical test with number ethics: 195 / UKH / L.02/EC/IX/2021.

RESULT AND DISCUSSION

Table 4.1 Sociodemographics of Chronic Renal Failure Patients Undergoing Hemodialysis

Characteristic	n (%)
Age	

Ages 18-50	21 (38,9)
Age >50 years	32 (59,3)
Gender	
man	24 (44,4)
Woman	29 (53,7)
Education Level	
Sd	8 (14,8)
Junior	22 (40,7)
Sma	16 (29,6)
D1-D3	4 (7,4)
S1	3 (5,6)
Work	
Work	14 (25,9)
Not Working	39 (72,2)
Old HD	
3 months -2 years	9 (16,7)
2-5 Years	20 (37,0)
>5 years	24 (44,4)
Fluid Intake Restrictions	
Obedient	20 (37,0)
Sometimes	27 (50,0)
Disobedient	6 (11,1)

Source: Primary Data 2021

Based on table 4.1 most of the 53 pasien interviewed with the average responden over the age of <50 years is more than 59.3%. In this study, there were 44.4% of male respondents and 53.7% of women. The level of education is dominated by patients with a junior secondary education level of 51.5%. Respondents who did not work were 72.2% more than those who did not work. Respondents who underwent hemodialysis therapy averaged more than 5 years 44.4 % of the total sample. Adherence to the average patient fluid restriction is of an occasional nature with a percentage of 50.0%.

Table 4.2 Quality of Life in Chronic Renal Failure Undergoing Hemodialysis

Quality of Life	Mean	Median	Booth. Dev.
Symptom/problem list	66.90	62.50	17.96
Effects of kidney disease	65.68	65.63	15.02
Burden of kidney disease	50.47	50.00	24.97
SF-12 Physical Health Composite	40.69	39.12	6.83
SF-12 Mental Health Composite	50.20	50.27	7.57

Source: Primary Data 2021

Based on table 4.2 presents quality of life data which shows that *the symptom / problem* has an average value of 66.90. For *the effect of kidney disease*, it has an average value of 65.68. Regarding *burden kidney disease* has an average value of 50.47. The *SF-12 Physical Health* assessment has an average score of 40.69. And the *SF-12 Mental Health* pentises an average score of 50.20.

DISCUSSION

Based on the results of the study, table 4.1, the average age of respondents was >50 years old. These results are in accordance with the research of Rapp et al., (2021) that the average chronic renal failure patient is aged 45-65 years, where increasing age has a risk of decreasing kidney function. Aged over 70 years has a 47% risk of GFR value below 60mL/min/1.73m² which is defined as kidney failure (Oh et al., 2019). In this study, age is associated with the quality of life in the symptom / problem list, these results are supported by the research of Nguyen et al., (2018) that old age has a risk of increasing mobility disorders, activity disorders and coping pain disorders /Discomfort. Whereas in this study old age was not associated with mental disorders of quality of life, this was because old age was more adaptable to chronic diseases and made simpler expectation adjustments compared to young age.

The resultsof the large number of people are female. These results are supported by Bikbov et al., (2018) that most of those who undergo hemodialysis therapy are women, this can happen because women have a risk of kidney disease caused by a history of previously suffered diseases such as hypertension, DM, and obesity. In this study, women were found to have a relationship with the Burden of Kidney Disease and SF-12 Mental Composite which can be interpreted to mean that women are physically weaker than men so that the burden of kidney disease felt is higher (Kefale et al., 2019). In addition, generally women in living life always think and act on feelings so that in facing disease, women cannot be separated from thinking about the family, the future of the child, social relations with the surrounding community, and the family economy (Mahato et al., 2020). So according to the research of Gemmell et al., (2016) in improving the quality of life women tend to be able to do self-distraction, do positive reframing, preventing and increasing religious coping.

Education in this study has a relationship with quality of life in the Effects of kidney disease which can be interpreted as a decrease in energy levels, limitations in carrying out activities, restriction of fluids and dietary restrictions. According to Ng et al., (2020) higher education is often associated with a better quality of life, this is because patients who have higher education will easily understand and receive information and carry out the recommendations that have been given.

Based on table 4.1 it explains most of the patients are out of work. Work problems according to Abdelghany et al., (2016) are associated because the patient retires, is not suitable in work or the patient has physical limitations in doing work so that the patient chooses not to work. This is supported by Firmansyah et al., (2018) that 2/3 of patients cannot return to work due to chronic renal failure.

In table 4.2 in this study, there is no significant relationship between work and quality of life, but that does not mean that work does not affect the quality of life of patients. Research by Tsai et al., (2017) explained that patients who have jobs become more independent and can meet their needs independently so as to make patients more confident and safe, it is inversely proportional if the patient is not working

CONCLUSION

The role of families and hospitals can improve and maintain the quality of life of chronic renal failure patients undergoing hemodialysis therapy

REFERENCES

1. Arikunto Suharsimi (2016). *Research Procedures A Practical Approach*. Jakarta: PT Rineka Cipta.
2. Abdelghany, M. A., Elgohary, E. E., & Nienaa, Y. A. (2016). Assessment of Health-Related Quality of Life in Patients Receiving Regular Hemodialysis. *Journal of Nephrology & Therapeutics*, 06(02), 1–4. <https://doi.org/10.4172/2161-0959.1000246>
3. Bikbov, B., Perico, N., & Remuzzi, G. (2018). Disparities in Chronic Kidney Disease Prevalence among Males and Females in 195 Countries: Analysis of the Global Burden of Disease 2016 Study. *Nephron*, 139(4), 313–318. <https://doi.org/10.1159/000489897>
4. Cahyani, N. D., Tyaswati, J. E., & Rachmawati, D. A. (2016). The Relationship between Anxiety Levels and Quality of Life in Chronic Kidney Disease (CKD) Patients Undergoing Hemodialysis at RSD dr. Soebandi Jember. *Health Library Journal*, 4(2), 210–217.
5. Chong, K., & Unruh, M. (2017). Why does quality of life remain an under-investigated issue in chronic kidney disease and why is it rarely set as an outcome measure in trials in this population? *Nephrology Dialysis Transplantation*, 32(February), ii47–ii52. <https://doi.org/10.1093/ndt/gfw399>
6. Covic, A., Kanbay, M., & Lerma, E. V. (2017). *Resistant Hypertension in Chronic Kidney Disease*. Springer International Publishing. <https://doi.org/10.1007/978-3-319-56827-0>
7. Dehvan, F., Monjazebi, F., Khanghahi, M. E., Mohammadi, H., Ghanei Gheshlagh, R., & Kurdish, A. (2018). Adequacy of dialysis in Iranian patients undergoing hemodialysis: A systematic review and meta-analysis. *Nephro-Urology Monthly*, 10(5). <https://doi.org/10.5812/numonthly.82235>
8. Ministry of Health. (2017). InfoDATIN Data and Information Center of the Ministry of Health of the Republic of Indonesia: Chronic Kidney Disease Situation. 1–10. www.depkes.go.id/resources/download/pusdatin/infodatin/
9. Surakarta Health Office. (2018). Surakarta City. Health Profile of Surakarta City, 6–7.
10. Ebrahimi, H., Sadeghi, M., & Khatibi, M. (2015). The Relationship Between Quality of Life With Dialysis Efficacy and Laboratory Parameters in Shahroud ' Hemodialysis Patients. *Iran Journal Critical Care Nursing*, 8(2), 109–116. <https://doi.org/10.1007/s00264-011-1344-1>

11. Esmaili, H., Majlessi, F., Montazeri, A., Nedjat, S., & Zeinali, J. (2018). Need assessment of hemodialysis patients to study. *Medical Science*, 22(91), 335–342. www.discoveryjournals.org
12. Firmansyah, Fadraersada, J., & Rusli, R. (2018). Quality of Life Study of Patients Undergoing Hemodialysis at A.W. Sjahranie Hospital. *Mulawarman Pharmaceuticals Conferences*, 51–56. <https://doi.org/https://doi.org/10.25026/mpc.v7i1.292>
13. Gemmell, L. A., Terhorst, L., Jhamb, M., Unruh, M., Myaskovsky, L., Kester, L., & Steel, J. L. (2016). Gender and Racial Differences in Stress, Coping, and Health-Related Quality of Life in Chronic Kidney Disease. *Journal of Pain and Symptom Management*, 52(6), 806–812. <https://doi.org/10.1016/j.jpainsymman.2016.05.029>
14. Indonesian Renal Registry. (2017). 10 th Report Of Indonesian Renal Registry.
15. Kanwal, N., & Afzal, M. (2017). Assess Spirituality and Spiritual Care in Nursing Practice in Public Hospital Lahore, Pakistan. *Journal of Scientific & Engineering Research Volume*, 8(5), 1348–1354.
16. Kefale, B., Alebachew, M., Tadesse, Y., & Engidawork, E. (2019). Quality of life and its predictors among patients with chronic kidney disease: A hospital-based cross sectional study. *PLoS ONE*, 14(2), 1–16. <https://doi.org/10.1371/journal.pone.0212184>
17. Mahato, S. K. S., Apidechkul, T., Sriwongpan, P., Hada, R., Sharma, G. N., Nayak, S. K., & Mahato, R. K. (2020). Factors associated with quality of life among chronic kidney disease patients in Nepal: A cross-sectional study. *Health and Quality of Life Outcomes*, 18(1), 1–14. <https://doi.org/10.1186/s12955-020-01458-1>
18. Maksum, M. (2015). The Relations Between Hemodialysis Adequacy And The Life Quality Of Patiens. *Medical Journal of Lampung University*, 4, 39–43. <http://juke.kedokteran.unila.ac.id/index.php/majority/article/view/499>
19. Mayuda, A., Chasani, S., & Saktini, F. (2017). The Relationship Between Hemodialysis Duration and Quality of Life of Chronic Kidney Disease Patients (Study at RSUP DR. Kariadi Semarang). *Diponegoro Journal of Medicine*, 6(2), 167–176.
20. Ng, M. S. N., Miaskowski, C., Cooper, B., Hui, Y. H., Ho, E. H. S., Mo, S. K. L., Wong, S. S. H., Wong, C. L., & So, W. K. W. (2020). Distinct Symptom Experience Among Subgroups of Patients With ESRD Receiving Maintenance Dialysis. *Journal of Pain and Symptom Management*, 60(1), 70-79.e1. <https://doi.org/10.1016/j.jpainsymman.2020.01.004>
21. Nguyen, N. T. Q., Cockwell, P., Maxwell, A. P., Griffin, M., O'Brien, T., & O'Neill, C. (2018). Chronic kidney disease, health-related quality of life and their

- associated economic burden among a nationally representative sample of community dwelling adults in England. *PLoS ONE*, 13(11), 1–12. <https://doi.org/10.1371/journal.pone.0207960>
22. Oh, T. R., Choi, H. S., Kim, C. S., Bae, E. H., Oh, Y. K., Kim, Y. S., Choi, K. H., Kim, S. W., & Ma, S. K. (2019). Association between health related quality of life and progression of chronic kidney disease. *Scientific Reports*, 9(1), 1–9. <https://doi.org/10.1038/s41598-019-56102-w>
 23. Rapp, J. L., Lieberman-Cribbin, W., Tuminello, S., & Taioli, E. (2021). Male Sex, Severe Obesity, Older Age, and Chronic Kidney Disease Are Associated With COVID-19 Severity and Mortality in New York City. *Chest*, 159(1), 112–115. <https://doi.org/10.1016/j.chest.2020.08.2065>
 24. Relawati, A., Hakimi, M., & Huriah, T. (2015). The Effect of Self Help Group on Quality of Life. *Scientific Journal of Nursing Health*, 11(3), 122–135.
 25. Shirazian, S., Aina, O., Park, Y., Chowdhury, N., Leger, K., Hou, L., Miyawaki, N., & Mathur, V. S. (2017). Chronic kidney disease-associated pruritus: Impact on quality of life and current management challenges. *International Journal of Nephrology and Renovascular Disease*, 10, 11–26. <https://doi.org/10.2147/IJNRD.S108045>
 26. Tsai, Y.-C., Chen, H.-M., Hsiao, S.-M., Chen, C.-S., Lin, M.-Y., Chiu, Y.-W., Hwang, S.-J., & Kuo, M.-C. (2017). Association of physical activity with cardiovascular and renal outcomes and quality of life in chronic kidney disease. *Plos One*, 12(8), e0183642. <https://doi.org/10.1371/journal.pone.0183642.t004>
 27. Zimbudzi, E., Lo, C., Ranasinha, S., Gallagher, M., Fulcher, G., Kerr, P. G., Russell, G., Teede, H., Usherwood, T., Walker, R., & Zoungas, S. (2016). Predictors of health-related quality of life in patients with co-morbid diabetes and chronic kidney disease. *PLoS ONE*, 11(12), 1–12. <https://doi.org/10.1371/journal.pone.0168491>