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Quality of Life with Psychosocial Assistance of Chronic Renal Failure (CRF) with Hemodialysis in The City of Bogor

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Abstract— Chronic kidney disease includes conditions that damage the kidneys and decrease their ability to keep them healthy. Kidney disease patients have no symptoms at all. At the worst, patients can be threatened with life if they do not undergo periodic hemodialysis or kidney transplantation to replace their severely damaged kidney organs. CKD patients who reach the final stage will experience a condition that causes disability, poor quality of life, and expensive social and financial costs. The study aimed to identify psychosocial assistance on patients' quality of life with chronic renal failure. This research is a quantitative study using a quasi-experimental method with the one group pre-test-post test design approach. Data collection using the WHOQOL quality of life questionnaire was then carried out psychosocial mentoring. Respondents were patients with chronic renal failure with hemodialysis, amounting to 34 people. The sampling method used purposive sampling. This study indicated that the quality of life significantly increased with p-value = (0.001). Domains that have increased are psychological domain p-value = (0.001) and environmental domain p-value = (0.001). The physical health domain (p = 0.639) and social domain (p = 0.751) did not change significantly. Many psychosocial problems occur in CRF patients with hemodialysis. Urgently needed support from family and community to improve patients' quality of life with hemodialysis with chronic renal failure.

Keywords: quality of life, psychosocial assistance, chronic renal failure, hemodialysis.

INTRODUCTION

Chronic renal failure is an abnormality of the kidneys' structure and function for more than three months and impactshealth[1]. Chronic kidney disease includes conditions that damage the kidneys and decrease their ability to keep them healthy for work. Chronic kidney disease complications include high blood pressure, anemia (low blood count), weak bones, malnutrition, and nerve damage. Sometimes kidney disease patients experience no symptoms at all. In the worst case, the patient could be in danger of his life if he did not undergo periodic hemodialysis (dialysis) or a kidney transplant to replace his badly damaged kidney.

Based on the 2018 Riskesdas in Indonesia, there was an increase in kidney failure, from 2% to 3.8% [2]. The death rate for hemodialysis patients during 2015 was 1,243 people and lived on hemodialysis for 1-317 months. CKD patients who reach the final stage will experience a condition that causes disability, poor quality of life, and expensive social and financial costs. Although it varies across countries, the annual incidence rates of patients starting renal replacement therapy are very high, ranging from 150 to 400 per one million people in the Western world to 50 per one million people in developing countries where access to health care is limited[3].

In addition to physical complaints experienced by someone with kidney failure, many psychosocial complaints are also found, such as sadness, anxiety, fear, and even feelings of helplessness due to illness. This patient's psychological condition will affect the patient's quality of life. Psychosocial

assistance is carried out to motivate and organize individuals to develop their potential to not depend on others. The psychosocial assistance carried out is expected to improve the quality of life of CRF patients with hemodialysis.

The quality of life of patients with CRF is still low. The social, emotional, and mental health domains, in general, are still low. The average quality of life of patients with chronic kidney failure is 56.98% (sufficient category). The analysis results show that the pre-social function domain means in the control group is 61.40%. The analysis results showed that the mean of the pre-emotional role domain in the control group was 62.36%. The analysis results showed that the control group's mean of pre-mental health domain was 66.21% [4].

Quality of life is the individual's perception of their position in life in the context of the culture and value system where they live, about their life goals, expectations, standards, and life focus[5]. Treatment of CRF patients makes severe restrictions affecting the quality of life. Quality of life usually includes objective and subjective evaluations of both positive and negative aspects of life. Researchers found a relationship between demographic, clinical, social, psychological, and medication quality of life[6].

Mentoring is a reciprocal process between the individual who accompanies and the individual being assisted, which aims to motivate and organize individuals in developing the resources of the person being assisted and not creating dependence on other people[7]. Psychosocial assistance is a combination of psychological handling and social handling.

The role of psychosocial assistance is to disclose and understand beneficiary problems (assessment), listen to complaints, worries, or difficulties experienced by patients. Create a mentoring plan and help patients design their problem-solving steps associated with psychological recovery. Conduct periodic evaluations. Make referrals to other families/institutions / other professions that are more competent according to the patient's interests. Psychosocial assistance was carried out in the hemodialysis room after the respondent underwent hemodialysis. One-time assistance 30-45 minutes. Mentoring is carried out two times a week for two weeks.

METHOD

This research uses a quasi-experimental method with the one group pre-test- post-test design approach. This design compares the intervention results in one group pre and post-intervention without a comparison group. The group in this study were chronic kidney failure patients who received psychosocial assistance.

This study's sample was all chronic kidney failure patients undergoing hemodialysis at PMI Hospital, Bogor City. The sampling technique used was purposive sampling. The number of samples in this study was 34 people. This study sample's inclusion criteria were willingness to be a respondent and cooperative, and the patient's general condition was stable. The exclusion criteria were patients with generally unstable conditions. Data were collected using the WHOQOL BREF quality of life questionnaire, which consisted of four domains: physical, psychological, social, and environmental domains [8]. Data were processed with univariate and bivariate analysis with computerization, using the SPSS program

RESULT

Table 1
Frequency distribution of respondents based on the characteristics of respondents in the Hemodialysis Room of the PMI Bogor City Hospital 2019 (n = 34)

Characteristics	Sub Characteristics	n	%
Gender	1. Male	22	64,7
	2. Female	12	35,3
Status	1. Married	27	79,4
	2. Single	5	14,7
	3. Widow/widower	2	5,9
Job	1. Civil servants	1	2,9
	2. Private employees	7	20,6
	3. Housewife	9	26,5
	4. Don't have a job	17	50,0

The most gender distribution of respondents was male, namely 22 people (64.7%). The distribution of female respondents was 12 people (35.3%). The distribution of the most respondents' status was married, namely 27 people (79.4%), five people single (14.7%), two people widow/widower (5.9%). Most of the respondents'don't have a job, 17 people (50%), seven respondents worked in private companies (20.6%), nine housewives (26.5%), and one person (2.9%) as civil servants.

Table 2
Distribution of respondents based on age, length of time suffering from chronic kidney failure, and length of time undergoing hemodialysis at PMI Bogor City Hospital, 2019 (n = 34)

Variable	Mean	SD	Minimum-Maximum	95% CI
Age	49,18	14,00	22-78	44,29-54,06
Duration of illness from kidney failure (years)	5,05	4,49	1-16	3,46-6,60
Hemodialysis Length	4,82	4,65	1-16	3,20-6,45

The results showed that the respondents' mean age was 49.18 years (95% CI: 44.29-54.06), with a standard deviation of 14.00%. The lowest age was 22 years, and the highest age was 78 years. The interval estimation resultsshow that 95% of the respondents believe that the respondents' mean age is between 44.29-54.06 years. The mean length of suffering from chronic renal failure was 5.05 years (95% CI: 3.46-6.60), with a standard deviation of 4.49 years. The lowest duration of suffering from CRF was one year, and the highest duration of suffering from CRF was 16 years. The results of interval estimation can be concluded that 95% of the time, it is believed that the mean length of suffering from CRF is between 3.46-6.60 years. The mean length of undergoing hemodialysis was 4.82 years (95% CI: 3.20-6.45), with a standard deviation of 4.65 years. The lowest hemodialysis length was one year; the

highest length of hemodialysis lengthwas 16 years. The result of interval estimation shows that 95% of it is believed that the mean length of undergoing hemodialysis is between 3.20-6.45 years.

Table 3
Distribution of quality of life pre and post psychosocial assistance at PMI Bogor City Hospital, the year 2019 (n = 34)

Variable	Mean	SD	Minimum-Maximum	95% CI
Quality of life (pre)	60,59	8,32	43-81	57,69-63,49
Quality of life (post)	67,32	9.47	50-83	64,02-70,63

The analysis results showed that the mean quality of life pre-intervention was 60.59% (95% CI: 57.69-63.49%), with a standard deviation of 8.32%. The lowest quality of life is 43%, and the highest quality of life is 81%. The result of interval estimation can be concluded that 95% is believed that the mean quality of life pre-intervention is between 57.69-63.49%. Post intervention's mean quality of life was 67.32% (95% CI: 64.02 - 70.63%), with a standard deviation of 9.47%. The lowest quality of life is 50%, and the highest quality of life is 83%. The result of interval estimation can be concluded that 95% is believed that the mean quality of life post-intervention is between 64.02 - 70.63%.

Table 4
Distribution of quality of life domains before psychosocial mentoring at PMI Bogor City Hospital, the year 2019 (n = 34)

Variable	**Mean**	**SD**	**Minimum-Maximum**	**95% CI**
Domain 1 pre	68,50	13,00	45-100	63,97-73,03
Domain 2 pre	65,68	10,96	46-96	61,85-69,50
Domain 3 pre	66,85	10,52	40-93	63,18-70,52
Domain 4 pre	60,74	7,40	45-75	58,15-63,32

The analysis showed that the mean of Domain 1 (physical) pre-intervention was 65.68% (95% CI: 61.85-69.50%), with a standard deviation of 13.00%. Domain 1 (Physical) is the lowest at 46%, and domain 1 is the highest at 96%. The interval estimation results can be concluded that 95% is believed that the mean domain 1 (physical) pre-intervention is between 61.85-69.50%.

The analysis results showed that the mean of Domain 2 (psychological) pre-intervention was 65.68% (95% CI: 61.85-69.50%), with a standard deviation of 10.96%. Domain 2 (psychological) has the lowest at 46%, and Domain 2 (psychological) is 96%. The result of interval estimation can be concluded that 95% is believed that the mean of Domain 2 (psychological) pre-intervention is between 61.85-69.50%.

The analysis showed that the mean of Domain 3 (social) pre-intervention was 66.85% (95% CI: 63.18-70.52%), with a standard deviation of 10.52%. Domain 3 (social) is the lowest at 40%, and Domain 3 (social) is the highest at 93%. The result of interval estimation can be concluded that 95% is believed that the mean of Domain 3 (social) pre-intervention is between 63.18-70.52%.

The analysis showed that the mean of Domain 4 (environment) pre-intervention was 60.74% (95% CI: 58.15-63.32%), with a standard deviation of 7.40%. Domain 4 (environment) is the lowest at 45%, and Domain 4 (environment) is the highest at 75%. The result of interval estimation can

be concluded that 95% is believed that the mean of Domain 4 (environment) pre-intervention is between 58.15-63.32%.

Table 5
Distribution of quality of life domains after psychosocial mentoring at PMI Bogor City Hospital, the year 2019 (n = 34)

Variable	Mean	SD	Minimum-Maximum	95% CI
Domain 1 post	69,47	9,93	48-84	66,01-72,93
Domain 2 post	77,65	10,59	62-100	73,95-81,34
Domain 3 post	66,06	11,24	47-93	62,14-69.98
Domain 4 post	68,71	10,26	50-85	65,13-72,28

The analysis results showed that the mean of Domain 1 (physical) post-intervention was 69.47% (95% CI: 66.01-72.93%), with a standard deviation of 9.93%. Domain 1 (Physical) has the lowest at 62%, and the highest domain 1 is 100%. The result of interval estimation can be concluded that 95% is believed that the mean of domain 1 (physical) post-intervention is between 66.01-72.93%.

The analysis showed that the mean of Domain 2 (psychological) post-intervention was 77.65% (95% CI: 73.95-81.34%), with a standard deviation of 10.59%. Domain 2 (psychological) is the lowest at 62%, and Domain 2 (psychological) is the highest at 100%. The result of interval estimation can be concluded that 95% is believed that the mean of Domain 2 (psychological) post-intervention is between 73.95-81.34%.

The analysis showed that the mean of Domain 3 (social) post-intervention was 66.06% (95% CI: 62.14-69.98%), with a standard deviation of 11.24%. Domain 3 (social) is the lowest at 47%, and Domain 3 (social) is the highest at 93%. The result of interval estimation can be concluded that 95% is believed that the mean of Domain 3 (social) post-intervention is between 62.14-69.98%.

The results showed that the mean of Domain 4 (environment) post-intervention was 68.71% (95% CI: 65.13-72.28%), with a standard deviation of 10.26%. Domain 4 (environment) has the lowest at 50%, and Domain 4 (environment) is 85%. The interval estimation results can be concluded that 95% is believed that the mean of Domain 4 (environment) post-intervention is between 65.13-73.28%.

2. Bivariate Analysis

Table 6
Distribution of average quality of life pre and post at the Intervention at PMI Hospital, Bogor City, in 2019 (n = 34)

Variable	Mean	SD	SE	P-value
Quality of Life				
Quality of Life (pre)	60,59	8,32	1,43	
Quality of Life (post)	67,32	9,47	1,62	0,001

The mean quality of life for pre-intervention patients was 35.50%, with a standard deviation of 20.45%. In the second measurement of life quality after applying for psychosocial assistance, the patient's mean quality of life was 50.33%, with a standard deviation of 18.75%. The mean difference between the first and second quality of life measures was 6.73, with a standard deviation of

9.42. The statistical test results obtained a value of 0.000; it can be concluded that there is a significant difference between the quality of life pre and the quality of life post-intervention.

Table 7
Distribution of mean domain quality of life pre and post at the Intervention at PMI Hospital, Bogor City, in 2019 (n = 34)

Variable	Mean	SD	SE	P-value
Domain 1 (Physical)				
pre	68,50	13,00	2,23	0,639
post	69,47	9,93	1,70	
Domain 2 (Psychological)				
pre	65,68	10,96	1,88	0,001
post	77,65	10,59	1,82	
Domain 3 (social)				
pre	66,85	10,52	1,93	0,751
post	66,06	11,24	1,27	
Domain 4 (environment)				
pre	60,74	7,40	1,43	0,001
post	68,71	10,26	1,62	

The mean of Domain 1 (physical) pre-intervention patients was 68.50%, with a standard deviation of 13.00%. In the second measurement of Domain 1 (physical) after implementing psychosocial assistance, the mean Domain 1 (physical) of the patients was 69.47% with a standard deviation of 9.93%. The mean difference between the first and second Domain 1 (physical) was 0.97, with a standard deviation of 11.95%. The statistical test results obtained a value of 0.639; it can be concluded that there is no significant difference between Domain 1 (physical) pre and Domain 1 (physical) post-intervention.

The mean of Domain 2 (psychological) in pre-intervention patients was 65.68%, with a standard deviation of 10.96%. In the second measurement, Domain 2 (psychological), after applying for psychosocial assistance, the mean Domain 2 (psychological) of patients was 77.65% with a standard deviation of 10.59%. The mean difference between the first and second Domain 2 (psychological) measures was 11.97 with a standard deviation of 12.75. The statistical test results obtained a value of 0.000; it can be concluded that there is a significant difference between Domain 2 (psychological) pre and Domain 2 (psychological) post-intervention.

Domain 3 (social) mean of pre-intervention patients was 66.85%, with a standard deviation of 10.52%. In the second measurement of Domain 3 (social) after implementing psychosocial assistance, the mean Domain 3 (social) of patients was 66.06% with a standard deviation of 11.24%. The mean difference between the first and second Domain 3 (social) measurements was 0.79, with a standard deviation of 14.45%. The statistical test results obtained a value of 0.751; it can be concluded that there is no significant difference between Domain 3 (social) pre and Domain 3 (social) intervention.

The mean of Domain 4 (environment) of pre-intervention patients was 60.59%, with a standard deviation of 8.32%. In the second measurement of Domain 4 (environment), after implementing

psychosocial assistance, the mean Domain 4 (environment) of patients was 68.71% with a standard deviation of 10.26%. The mean difference between the first and second Domain 4 (environment) was 8.12%, with a standard deviation of 10.09. The statistical test results obtained a value of 0.000; it can be concluded that there is a significant difference between Domain 4 (environment) pre and Domain 4 (environment) intervention.

DISCUSSION

Most respondents were male, with 69 people and 31 women. Sixty-six (66%) patients were married, 14 (14%) were single, 8 (8%) were divorced, and 12 (12%) were widows. Most of the respondents with CRF (80.81%) did not work [10]. Most of the respondents said that their bodies were weak after suffering from CRD and easily felt tired, so they could not work. Most respondents said they quit their job because of decreased physical abilities.

Normal age-related physiological changes in renal function often decrease GFR by ~ 60-90 mL / min / 1.73 m2. The age-related decrease in GFR was ~ 1 mL / min / 1.73 m2 / year, starting after 30-40 years. Additionally and paradoxically, there is a reduction in muscle mass associated with aging [9].

The mean length of undergoing hemodialysis was 4.82 years (95% CI: 3.20-6.45). The results of research by Gerogianni et al. in 2016 showed that 44% of respondents had hemodialysis lengthfor 1-3 years, and 28% had between 4-8 years. Most of the 79% of respondents have hemodialysis lengththerapy for more than one year [12]. Quality of life for patients with end-stage kidney disease Hemodialysis therapy at the regional public service agency dr Zainoel Abidin Banda Aceh, in 2013, was in a good category as many as 36 respondents (69%) [11].

The average patient who hadhemodialysis experienced a decline in cognitive and psychomotor functions.Cognitive functions include the process of learning, perception, understanding, understanding, attention, and so on, causing patient reactions and behavior to slow down. Meanwhile, psychomotor functions include things related to impulse, such as movement, action, coordination, which results in the patient becoming less agile [12]. The respondent also experiences physical changes, namely bones feel crumbly so that the respondent cannot walk far or do too much activity.

Patients feel the change in the role of ESRD patients undergoing dialysis therapy. A person who is the backbone of the family will change instantly. The necessities of life that were previously fulfilled by the patient can no longer be done. It will create new problems in the patient's family [12]. The interviews with several respondents said that they were no longer working so that the wife who replaced work made a living. So that respondents feel ashamed of their wives. Most of the respondents said they felt embarrassed or insecure if they had to deal with other people. Their insecurity includesbody shape changes, thin, black skin, and porous bones that make it difficult to do activities.

Most of the respondents said it was difficult to go outside because they felt weak and had difficulty moving. Respondents said they had not participated in activities in their environment. They are only at home doing light work. Some of the respondents did not know about kidney failure, so they stayed away from the respondents for fear of contracting them.

Psychosocial intervention should be carried out as early as possible since the diagnosis of renal failure is established. These interventions must be carried out continuously to make it better. Several things are included in psychosocial interventions that will improve the patient's quality of life—first, nursing implications (the nurse's role). Second, build a relationship of mutual trust, education, motivation, and support. The third is encouraging, teaches how to help yourself and monitor yourself [12].

With psychosocial assistance, the quality of life of CKD patients with hemodialysis can be improved. With psychosocial assistance, patient feelings can be explored. There is a strengthening process so that patients can immediately accept their situation. Psychosocial assistance is therapy or a way to process the treatment and recovery of subjects from psychosocial problems. In principle, psychosocial assistance aims to help CRF patients with hemodialysis improve their quality of life so that patients can carry out their roles and lives. The role of nurses in psychosocial assistance through providing information, counseling support, and advocacy so that fear, anxiety, depression, confusion, and feelings of helplessness in RKD patients can be resolved so that the quality of life of RK patients can be improved.

CONCLUSION

The mean difference between the first and second quality of life measures was 6.73, with a standard deviation of 9.42. The statistical test results obtained a value of 0.001; it can be concluded that there is a significant difference between the quality of life pre and the quality of life post psychosocial assistance intervention.

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