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RESEARCH

HEALTH-RELATED QUALITY OF LIFE OF PATIENTS UNDERGOING HEMODIALYSIS IN THE AGRESTE REGION OF PERNAMBUCO

QUALIDADE DE VIDA RELACIONADA À SAÚDE DE PACIENTES EM HEMODIÁLISE NO AGRESTE PERNAMBUCANO

CALIDAD DE VIDA RELACIONADA CON LA SALUD DE PACIENTES EN HEMODIÁLISIS EN EL AGRESTE DE PERNAMBUCO

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ABSTRACT

Objetivo: to analyze the association between sociodemographic factors and the quality of life of patients with chronic kidney disease undergoing hemodialysis in the Agreste region of Pernambuco. **Methods:** a quantitative cross-sectional study conducted with 114 patients selected through convenience sampling. The Kidney Disease and Quality of Life Short Form, comprising 19 dimensions of health-related quality of life, was used. The analysis was performed using Student's t-test, adopting a significance level of 95% ($p < 0.05$). In addition, descriptive analysis was performed using measures of central tendency and dispersion, and the normality of the variables was assessed using the Kolmogorov-Smirnov test. **Results:** the lowest scores were observed in the work status (12.28), role limitations due to physical health (14.91), and burden of kidney disease (47.64) dimensions. Significant associations were observed between health-related quality of life and the variables sex, age group, self-reported skin color, and occupation ($p < 0.05$). Lower quality of life scores were identified among female patients, those older than 30 years, those who self-identified as White, and those who were working. **Conclusions:** patients with chronic kidney disease undergoing hemodialysis in the Agreste region of Pernambuco were found to have impaired health-related quality of life, particularly in the work status, role limitations due to physical health, and burden of kidney disease domains.
Keywords: Renal Dialysis; Renal Insufficiency, Chronic; Kidney Diseases; Hemodialysis Units, Hospital; Quality of Life; Indicators of Quality of Life; Socioeconomic Factors; Cross-Sectional Studies.

RESUMO

Objetivo: *analisar a associação entre fatores sociodemográficos e a qualidade de vida de pacientes com doença renal crônica em tratamento hemodialítico no Agreste pernambucano.* ***Métodos:*** *estudo transversal, quantitativo, realizado com 114 pacientes selecionados por amostragem por conveniência. Utilizou-se o Kidney Disease and Quality of Life Short Form, composto por 19 dimensões de qualidade de vida relacionada à saúde. A análise foi realizada por meio do teste t de Student, adotando-se nível de significância de 95% ($p < 0,05$). Ademais, foi realizada análise descritiva, com medidas de tendência central e dispersão, bem como verificada a normalidade das variáveis por meio do teste de Kolmogorov-Smirnov.* ***Resultados:*** *os menores escores foram observados nas dimensões papel profissional (12,28), função física (14,91) e sobrecarga da doença renal (47,64). Foram observadas associações significativas entre a qualidade de vida relacionada à saúde e as variáveis sexo, faixa etária, cor da pele autodeclarada e ocupação ($p < 0,05$). Menores escores de qualidade de vida foram identificados entre pacientes do sexo feminino, com idade superior a 30 anos, autodeclarados brancos e que exerciam atividade laboral.* ***Conclusões:*** *conclui-se que os pacientes com doença renal crônica em tratamento hemodialítico no Agreste pernambucano apresentaram comprometimento da qualidade de vida relacionada à saúde, especialmente nos domínios papel profissional, função física e sobrecarga da doença renal.*
Palavras-chave: *Diálise Renal; Insuficiência Renal Crônica; Nefropatias; Unidades Hospitalares de Hemodiálise; Qualidade de Vida; Indicadores de Qualidade de Vida; Fatores Socioeconômicos; Estudos Transversais.*

RESUMEN

Objetivo*: analizar y asociar los factores sociodemográficos con la calidad de vida de pacientes con enfermedad renal crónica en tratamiento de hemodiálisis en el Agreste de Pernambuco.* ***Métodos:*** *estudio transversal y cuantitativo, realizado con 114 pacientes seleccionados mediante muestreo por conveniencia. Se utilizó el Kidney Disease and Quality of Life Short Form, que comprende 19 dimensiones de calidad de vida relacionada con la salud. El análisis se realizó mediante la prueba t de Student, con un nivel de significación del 95% ($p<0,05$). Asimismo, se realizó estadística descriptiva mediante medidas de tendencia central y dispersión, así como la comprobación de la normalidad de las variables mediante la prueba de Kolmogorov-Smirnov.* ***Resultados:*** *las puntuaciones más bajas se observaron en las dimensiones función laboral (12,28), función física (14,91) y carga de la enfermedad renal (47,64). Se observaron asociaciones significativas entre la calidad de vida relacionada con la salud y las variables sexo, grupo etario, color de piel autodeclarado y ocupación ($p<0,05$). Se identificaron puntuaciones más bajas de calidad de vida entre las pacientes de sexo femenino, las personas mayores de 30 años, aquellas que se autodeclararon blancas y quienes desempeñaban una actividad laboral.* ***Conclusiones:*** *los pacientes con enfermedad renal crónica en tratamiento de hemodiálisis en el Agreste de Pernambuco presentaron un deterioro de la calidad de vida relacionada con la salud, especialmente en los dominios función laboral, función física y carga de la enfermedad renal.*

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Palabras clave: *Diálisis Renal; Insuficiencia Renal Crónica; Enfermedades Renales; Unidades de Hemodiálisis en Hospital; Calidad de Vida; Indicadores de Calidad de Vida; Factores Socioeconómicos; Estudios Transversales.*

INTRODUCTION

Chronic kidney disease (CKD) is characterized by progressive kidney damage that impairs kidney function. Worldwide, this condition constitutes a serious public health problem, affecting approximately 850 million people, of whom approximately 4 million require kidney replacement therapy[1,2]. It is estimated that, by 2050, CKD will become the fifth leading underlying cause of death worldwide. Its most severe form is chronic kidney failure, which, depending on its severity, is treated through peritoneal dialysis, hemodialysis, or kidney transplantation[1-3].

In Brazil, CKD constitutes a major public health problem because of its high morbidity and mortality, health care costs, and the progressive increase in the number of people requiring kidney replacement therapy. National data indicate a 58% increase in the prevalence of patients undergoing dialysis over the past decade, reflecting both population aging and the high prevalence of associated conditions, such as hypertension and diabetes mellitus(4). According to the Brazilian Dialysis Census, the estimated number of patients receiving kidney replacement therapy in Brazil in 2020 was 144,779[5].

Among these treatments, hemodialysis is the most widely used modality. However, this therapy can impair the quality of life of patients and their families because of various physiological and emotional changes, such as fatigue, nausea, vomiting, pain, sleep disturbances, anxiety, depression, and changes in body image[6]. Thus, undergoing treatment can negatively affect health-related quality of life (HRQOL), requiring adaptations by patients[7,8].

In this context, assessing HRQOL stands out as an important indicator that complements traditional clinical outcomes by providing an understanding of the impact of disease and treatment on the physical, emotional, social, and functional aspects of patients' lives. In addition to informing care planning, HRQOL assessment helps guide interventions aimed at improving well-being and adaptation to treatment[9].

The multidisciplinary team should recognize the importance of assessing quality of life throughout the therapeutic process, from explaining the disease to patients and their families to providing the comfort and assistance needed to adapt to the illness[9].

Findings from studies of HRQOL in patients undergoing hemodialysis can contribute to understanding the reality experienced by patients with chronic kidney disease and, consequently, inform the planning and implementation of strategies to improve their HRQOL

Although Brazilian studies have investigated the HRQOL of people with CKD undergoing hemodialysis[10,12], evidence from municipalities in the interior of northeastern Brazil remains scarce, particularly in the Agreste region of Pernambuco, whose sociodemographic, economic, and health service access characteristics differ from those of other settings in the country. Thus, understanding HRQOL and its association with sociodemographic factors in this population can contribute to planning care activities that are better suited to local needs and strengthening health care for people with CKD. Therefore, this study is needed to generate information relevant to health care.

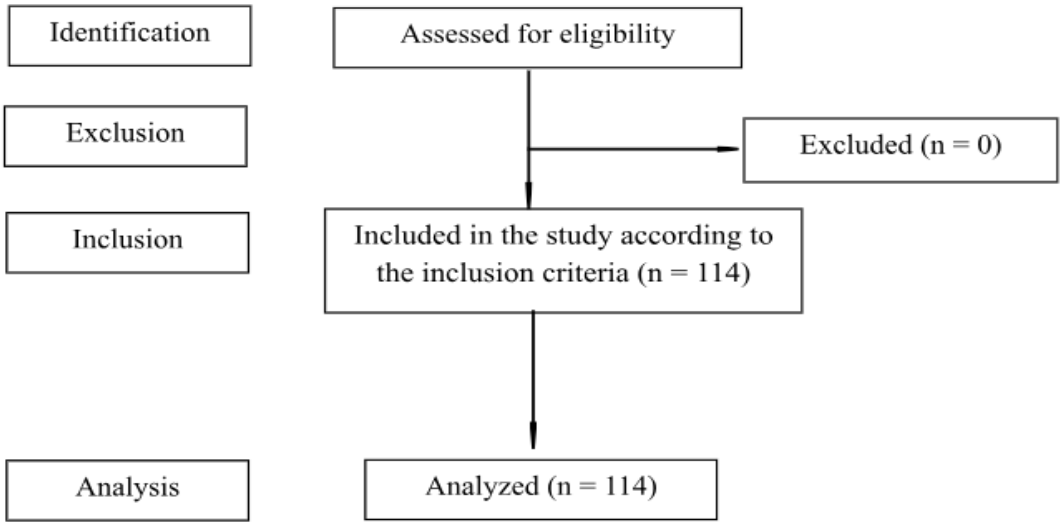
In view of the above, the objective of this study was to analyze the association between sociodemographic factors and the HRQOL of patients with CKD undergoing hemodialysis in the Agreste region of Pernambuco.

METHOD

This is a quantitative cross-sectional study conducted in accordance with the Strengthening the Reporting of Observational Studies in Epidemiology (STROBE) recommendations. The study was conducted at a nephrology referral unit in the Agreste region of the state of Pernambuco, Brazil. The population comprised patients at this service who had been diagnosed with CKD and were undergoing hemodialysis. During the data collection period, the hemodialysis service had 400 patients receiving regular follow-up, who constituted the eligible population. Of these, 114 met the inclusion criteria and agreed to participate in the study, comprising the final sample, selected through convenience sampling. The participation rate was 28.5%, as shown in Figure 1.

Nonprobability convenience sampling was used, comprising eligible patients present at the service during the data collection period. Given the study design and recruitment strategy adopted, no prior sample size calculation was performed. Patients diagnosed with CKD, undergoing hemodialysis, and aged 18 years or older were included. Patients who lacked the cognitive capacity to participate in the study and those whose medical records reported neoplasms, acquired immunodeficiency syndrome, or viral hepatitis were excluded, as these conditions could affect their responses. Refusals and losses were also considered exclusion criteria.

Figure 1 – STROBE flowchart



Source: Prepared by the authors.

Data were collected through individual interviews using printed questionnaires, conducted by researchers who had been trained beforehand to administer the instruments. Two researchers participated in data collection, following standardized procedures for approaching participants and recording information.

The interviews were conducted on the premises of the hemodialysis clinic, in a private location, before or during sessions, according to the participants' clinical conditions and availability. To ensure privacy and confidentiality, interviews were conducted individually, without third parties who were not involved in the study, ensuring the confidentiality of the collected data. Completed questionnaires were identified by numerical codes and stored in a secure location accessible only to the research team.

Two instruments were administered: a participant characterization questionnaire comprising sociodemographic variables (sex, age group, marital status, educational attainment, and self-reported skin color) and clinical variables (diagnosed conditions); and the Kidney Disease and Quality of Life Short Form (KDQOL-SF, version 1.3), developed in 1997 by the World Health Organization Quality of Life Working Group, validated and translated in Brazil in 2003. This instrument consists of items organized into three-, five-, six-, or seven-point Likert-type scales, in addition to dichotomous and categorical questions. The scores for each domain are transformed into a scale from 0 to 100, on which higher values indicate a better perceived quality of life[13].

The KDQOL-SF 1.3 has 19 HRQOL dimensions: symptoms/problems; effects of kidney disease; burden of kidney disease; work status; cognitive function; quality of social interaction; sexual function; sleep; social support; dialysis staff encouragement; patient satisfaction; physical functioning; role limitations due to physical health; pain; general health; emotional well-being; role limitations due to emotional problems; social function; and energy/fatigue.

In this study, the sexual function domain was not included in the data analysis because of the small number of responses, which would compromise the representativeness and comparability of the results. Thus, descriptive and inferential analyses were conducted considering 18 HRQOL domains. These domains were assessed separately and have scores ranging from 0 to 100 points. The higher the score (mean), the better the quality of life[13].

After collection, the data were independently entered into electronic spreadsheets by two researchers and subjected to a double-entry procedure to verify consistency. Identified discrepancies were checked against the original instruments and corrected when necessary. Subsequently, the database was validated, including checks for inconsistencies, missing values, and potential completion errors, before the statistical analyses were performed.

The data were analyzed using Statistical Package for the Social Sciences software, version 20.0. Initially, descriptive analysis was performed using absolute and relative frequencies for categorical variables and measures of central tendency and dispersion (mean, median, and standard deviation) for the KDQOL-SF domains. The normality of the data distribution was assessed using the Kolmogorov-Smirnov test, complemented by inspection of descriptive measures (mean and median) and assessment of score skewness. For variables with a normal

distribution, Student's t-test was used to compare two independent groups. For domains with a skewed distribution, the nonparametric Mann-Whitney test was used. A significance level of 5% ($p<0.05$) was adopted for all analyses.

The ethical and legal provisions of Resolution No. 466/2012 were observed, and data collection took place after the informed consent form had been signed in duplicate. The study was approved by the Research Ethics Committee.

RESULTS

Among the 114 study participants, males predominated (59.6%), with the highest frequency in the age group between 30 and 60 years (57.9%). Regarding religion, Catholicism predominated (67.5%), followed by Evangelical Christianity (21.1%). Regarding marital status, being married was the most prevalent status (47.4%). Regarding educational attainment, elementary education predominated (64.1%), followed by high school education (21.1%). In addition, 12.3% of participants were illiterate and only 2.7% had higher education. Most lived in urban areas (71.9%). Regarding occupational status, 40.4% were working, 28.1% were retired, and 24.6% were receiving receiving sickness benefits. Regarding family income, a monthly income of up to one minimum wage predominated (85.1%), as shown in Table 1.

According to the KDQOL-SF scores, better perceived HRQOL was observed in the quality of social interaction (85.50), social support (84.36), and cognitive function (80.99) domains. Conversely, the lowest scores were identified in the work status (12.28), role limitations due to physical health (14.91), and burden of kidney disease (47.64) domains, indicating greater impairment in these dimensions. In addition, the physical functioning (56.05), energy/fatigue (58.90), and general health (52.63) domains also had lower scores than the others, as shown in Table 2.

In the analysis of HRQOL domains by sex and age group, women had lower scores in the sleep (61.00; $p=0.02$), physical functioning (47.77; $p=0.02$), pain (50.94; $p<0.001$), emotional well-being (66.13; $p=0.03$), and energy/fatigue (50.88; $p=0.01$) domains. Regarding age group, individuals aged 30 years or older had a lower score in the role limitations due to physical health domain (13.34; $p=0.04$). No statistically significant differences were observed in the other domains assessed, as shown in Table 3.

Table 1 – Sociodemographic and socioeconomic profile of patients with CKD undergoing hemodialysis. Caruaru, PE - Brazil, 2020 (n=114).

Variable		n	%
Age group (years)			
	< 30	10	8,8
	30–60	66	57,9
	> 60	38	33,3
Sex			
	Male	68	59,6
	Female	46	40,4
Religion			
	Catholic	77	67,5
	Evangelical Christian	24	21,1
	Spiritist	1	0,9
	None	12	10,5
Marital status			
	Single	39	34,2
	Married	54	47,4
	Divorced	10	8,8
	Widowed	8	7,0
	Other	3	2,6
Educational attainment			
	Illiterate	14	12,3
	Elementary education	73	64,1
	High school education	24	21,1
	Higher education	3	2,7
Area of Residence			
	Rural	32	28,1
	Urban	82	71,9
Occupational status			
	Working	46	40,4
	Receiving Sickness Benefits	28	24,6
	Retired	32	28,1
	Unemployed	8	6,0
	Homemaker	1	0,9
Family income (multiples of the minimum wage)			
	≤ 1	97	85,1
	2–5	15	13,2
	> 5	0	0,0

Source: Study data.

Differences in HRQOL domain scores were observed according to skin color/race and occupation. Participants who self-identified as White had lower scores in the sleep domain than those who self-identified as Black or Brown (58.53 versus 73.01; $p<0.001$). Regarding occupation, individuals who were working had lower scores

Table 2 – HRQOL of patients with CKD according to the KDQOL-SF 1.3. Caruaru, PE, Brazil, 2020 (n = 114)

Domain	Mean	Median	SD
Quality of social interaction	85,50	93,33	19,68
Social support	84,36	100,00	29,52
Cognitive function	80,99	86,67	22,46
Symptoms/problems	78,84	83,33	16,66
Dialysis staff encouragement	78,62	87,50	21,47
Emotional well-being	72,56	80,00	26,56
Effects of kidney disease	72,48	73,44	19,25
Social function	69,19	75,00	26,46
Sleep	67,81	75,00	25,94
Patient satisfaction	67,40	66,67	22,11
Pain	67,35	70,00	34,27
Role limitations due to emotional problems	66,08	100,00	44,56
Energy/fatigue	58,90	65,00	27,19
Physical functioning	56.05	60.00	27.19
General health	52.63	50.00	31.01
Burden of kidney disease	47.64	50.00	21.60
Role limitations due to physical health	14.91	0.00	27.68
Work status	12.28	0.00	25.05

Source: Study data.

in the symptoms/problems (74.60 versus 81.91; p=0.02), pain (57.39 versus 74.58; p<0.001), and role limitations due to emotional problems (47.22 versus 79.79; p<0.001) domains. Conversely, participants who were not working had higher scores in the social function domain (75.00 versus 64.96; p=0.04), as shown in Table 4.

DISCUSSION

The results revealed a sociodemographic profile characterized by a predominance of men, adults and older adults, low educational attainment, and high socioeconomic vulnerability. The male predominance observed is consistent with international studies. Data from China show that 59.6% to 60.7% of patients undergoing hemodialysis are men, while Brazilian studies and studies from other countries also report a higher prevalence of males in this population[14,15].

The higher incidence and progression of CKD among men are related to an increased risk of disease progression, a more rapid decline in glomerular filtration rate, and higher cardiovascular mortality compared with women. In addition, gender-related factors, such as less frequent use of health services and lower disease awareness among men, contribute to late diagnosis and rapid disease progression[16].

The low educational attainment identified may represent an additional vulnerability factor, as lower education levels are associated with difficulties in understanding treatment instructions, adhering to treatment, and developing self-care. The international literature confirms that patients undergoing hemodialysis often have low educational attainment (most patients have a high school education or less)[14,17]. Low educational attainment may be associated with difficulties in understanding treatment instructions and lower treatment adherence, constituting an additional vulnerability factor.

At the same time, the high proportion of individuals with a family income of up to one minimum wage underscores socioeconomic inequalities that may influence access to health services, continuity of treatment, and perceived HRQOL. Socioeconomic deprivation constitutes an important risk factor for declining kidney function, particularly among women, although it affects both sexes. Socioeconomic and cultural barriers result in reduced access to health care, less disease monitoring, and inequalities in the initiation of kidney replacement therapy[16,18].

The results of this study revealed impaired HRQOL among patients with CKD undergoing hemodialysis, particularly in the burden of kidney disease, role limitations due to physical health, and work status domains, which had the lowest scores among the dimensions assessed. These findings suggest that, in addition to the clinical repercussions of the disease, patients face substantial limitations in daily life related to treatment dependence, restrictions imposed by their health condition, and difficulties in maintaining occupational and functional activities.

The burden of kidney disease domain had a low score (47.64), highlighting the impact that CKD and hemodialysis have on individuals' lives. The need to attend dialysis sessions frequently, dietary and fluid restrictions, dependence on ongoing care, and uncertainties regarding disease progression may contribute to a greater perceived physical, emotional, and social burden. National and international studies show that treatment dependence and disease-imposed limitations are determining factors in reduced HRQOL among patients undergoing hemodialysis[19,20].

Regarding role limitations due to physical health, the low score (14.91) may be related to fatigue, loss of muscle strength, functional limitations, and reduced ability to perform activities of daily living, conditions frequently reported by individuals with CKD receiving dialysis therapy. These changes result from both disease

Table 3 – Association between HRQOL domains and sex and age group among patients with CKD undergoing hemodialysis according to the KDQOL-SF. Caruaru, Pernambuco, Brazil, 2020 (n=114)

KDQOL-SF domains	Sex		*p*	Age		*p*
	Male	Female		< 30	≥ 30	
Symptoms/problems	81,43	74,86	0,39	78,59	78,86	0,09
Sleep	72,24	61,00	0,02	72,50	67,30	0,53
Physical functioning	61,44	47,77	0,02	67,27	54,85	0,20
Role limitations due to physical health	14,13	16,11	0,68	29,54	13,34	0,04
Pain	78,04	50,94	<0,001	72,27	66,82	0,61
Emotional well-being	76,75	66,13	0,03	67,27	73,12	0,49
Role limitations due to emotional problems	61,83	72,59	0,20	66,66	66,01	0,96
Social function	70,65	66,94	0,46	75,00	68,56	0,44
Energy/fatigue	64,13	50,88	0,01	60,45	58,73	0,84

Source: Study data.
Note: Values correspond to the mean scores of the KDQOL-SF domains. For variables with a normal distribution, Student's t-test for independent samples was used. For the role limitations due to physical health domain, which had a skewed distribution, the Mann-Whitney test was used. A significance level of 5% ($p<0.05$) was adopted.

Table 4 – Association between HRQOL domains, skin color/race, and occupation among patients with CKD undergoing hemodialysis according to the KDQOL-SF. Caruaru, Pernambuco, Brazil, 2020 (n=114)

KDQOL-SF domains	Skin color/race		*p*	Occupation		*p*
	White	Black and Brown		Working	Not working	
Symptoms/problems	78,76	78,88	0,97	74,60	81,91	0,02
Sleep	58,53	73,01	<0,001	65,93	69,16	0,51
Physical functioning	50,12	59,38	0,12	53,33	58,03	0,42
Role limitations due to physical health	11,58	16,78	0,29	17,70	12,87	0,31
Pain	63,17	69,69	0,33	57,39	74,58	<0,001
Emotional well-being	74,14	71,67	0,63	74,16	71,39	0,58
Role limitations due to emotional problems	73,98	61,64	0,15	47,22	79,79	<0,001
Social function	68,59	69,52	0,85	64,96	75,00	0,04
Energy/fatigue	56,21	60,41	0,43	58,12	59,46	0,79

Source: Study data.
Note: Values correspond to the mean scores of the KDQOL-SF domains. For variables with a normal distribution, Student's t-test for independent samples was used. For the role limitations due to physical health domain, which had a skewed distribution, the Mann-Whitney test was used. A significance level of 5% ($p<0.05$) was adopted.

progression and the repercussions of treatment, compromising patients' autonomy and social participation[21,22].

In addition, the work status domain had the lowest score (12.28), indicating that CKD and hemodialysis can significantly interfere with entry into and continued participation in the labor market. The frequency of dialysis sessions, physical limitations, and disease-associated symptoms often hinder occupational performance, sometimes resulting in absence from work and reduced family income[23].

An international study revealed that 54.6% of people with CKD lost their jobs after starting hemodialysis because of frequent absences from work. In addition, the same study reported a low employment rate among patients with CKD even before hemodialysis initiation[24]. Another study found that HRQOL was higher among those who worked. The authors attributed this to the benefit of these patients shifting their focus away from their kidney disease, as well as to the social contact and interaction provided by work, which may improve their ability to cope with difficulties[25].

The quality of social interaction and social support dimensions, considered fundamental support mechanisms in adapting to treatment and to the effects of disease on the lives of patients with chronic kidney disease, had the highest scores (85.50 and 84.36, respectively) among the

HRQOL results. One study reports that the social aspects of individuals receiving kidney replacement therapy contribute to increased treatment satisfaction, self-care, and, consequently, HRQOL[26]. These results underscore the importance of the multidisciplinary team's attention to biopsychosocial aspects to promote more effective socialization strategies.

Both CKD and hemodialysis treatment can reduce the HRQOL of patients and their families[19]. In this study, women had more impaired quality of life than men. Poorer perceived quality of life among women may be related, among other factors, to the greater occurrence of emotional symptoms described in the literature for patients with chronic diseases[27]. However, this association should be interpreted in light of the biological, psychosocial, and cultural factors that influence the experience of illness and perceived health.

In addition, patients older than 30 years had poorer HRQOL in the role limitations due to physical health domain. One study shows that people undergoing hemodialysis have lower levels of physical activity, strength, energy expenditure, and sleep quality, corroborating the findings of this study[28].

wIt is evident that different physiological, emotional, and social aspects significantly affect the quality of life dimensions of patients undergoing hemodialysis. Hemodialysis is an ongoing, painful process that causes changes in individuals' lives, although it is essential to sustaining their lives[29].

Thus, individuals receiving kidney replacement therapy face demanding challenges in the pursuit of quality of life, . A change in perspective is needed, with renewed attention to patients with kidney disease, who have basic needs for living and social interaction despite their chronic condition and vulnerability.

The main limitations of this study were the inability to analyze cause-and-effect relationships and its being conducted at a single referral center in a mesoregion of the state of Pernambuco. Nevertheless, analyses of this nature can support evidence-based practice among health care teams because they directly address patients' quality of life. By identifying such situations, it is possible to promote comfort, encourage self-care, and foster resilience during treatment.

In addition to the limitations already presented, the study results should be interpreted considering certain methodological issues. The use of nonprobability convenience sampling may limit the representativeness of the sample and, consequently, the generalizability of the findings to other populations undergoing hemodialysis. Furthermore, as this is a single-center study, the results reflect specific characteristics of the setting investigated and may differ from those of other regions and health services. Potential survivorship bias should also be considered, as patients with greater clinical severity or those who died before data collection were not included, which may have influenced the HRQOL assessment.

Another limitation concerns the lack of analytical adjustment for comorbidities and other clinical variables potentially associated with HRQOL, as well as the absence of multivariate analysis, precluding assessment of the independent influence of the sociodemographic factors investigated. Despite these limitations, the study contributes to understanding HRQOL among patients with CKD undergoing hemodialysis in a region that remains underexplored in the scientific literature.

The results of this study emphasize the need for greater attention to factors related to the HRQOL of patients undergoing hemodialysis and may inform new approaches to nephrology care aimed at improving this quality of life. Further studies are recommended, particularly those investigating the effects of treatment on HRQOL.

CONCLUSION

It is concluded that patients with CKD undergoing hemodialysis in the Agreste region of Pernambuco had impaired HRQOL, particularly in the work status, role limitations due to physical health, and burden of kidney disease domains. In addition, associations were identified between sociodemographic characteristics and different dimensions of quality of life, highlighting the influence of factors such as sex, age group, skin color/race, and occupation on these individuals' perceived health. These results reinforce the importance of comprehensive, individualized care that considers not only the clinical aspects of the disease but also the sociodemographic characteristics that may affect the quality of life of patients undergoing hemodialysis.

The findings reinforce the importance of systematically assessing HRQOL in clinical practice, as this allows early identification of specific needs and planning of individualized care. For nursing, the results highlight the need for interventions aimed at maintaining functional capacity, coping with the psychosocial repercussions of the disease, and strengthening patients' occupational and social participation, contributing to improved HRQOL and comprehensive care.

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