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Original Article

Dose-Response Relationship Between Social Support and Quality of Life in End-Stage Renal Disease

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Abstract

Background and aims: Evaluating quality of life is essential for addressing patients' fundamental challenges and guiding treatment approaches. This study examined the quality of life and the factors influencing it among patients with chronic kidney disease (CKD).

Methods: This cross-sectional study was conducted in Western Iran over one year, using a census-based approach. Data were collected via the SF-36 Quality of Life Questionnaire and structured social support assessments. Crude and adjusted linear regression models were employed to assess associations.

Results: The results indicated that 92.4% of patients reported a moderate quality of life, while 32.8% experienced moderate social support. The mean quality of life score was 50.48 ± 5.86, and the mean social support score was 42.29 ± 5.65. Quality of Life scores increased steadily with rising social support, peaking around a score of 40, followed by a slight decline beyond this threshold. Adjusted regression analysis confirmed that social support significantly enhances quality of life ($P = 0.032$; β = 2.86, 95% CI: 1.77, 3.95). Additionally, individuals with higher economic status demonstrated better quality of life outcomes ($P < 0.001$; β = 2.48, 95% CI: 0.50, 4.46). Additional significant associations were observed for age group ($P = 0.01$), smoking status ($P = 0.02$), and support from welfare organizations ($P = 0.01$).

Conclusion: This study established a direct association between quality of life and social support, with significant connections observed in physical health, social relationships, and overall well-being.

Keywords: Chronic kidney disease, Hemodialysis, Quality of life, Social support

Introduction

End-Stage Renal Disease (ESRD), or stage 5 Chronic Kidney Disease (CKD), is a progressive and often irreversible condition leading to the complete loss of kidney function, causing significant complications and challenges for patients.[1] CKD is a debilitating condition that requires careful monitoring and timely referral to specialists for dialysis or kidney transplantation. According to Kidney Disease Improving Global Outcomes (KDIGO) guidelines, CKD is diagnosed based on kidney damage indicators, including proteinuria and the glomerular filtration rate (GFR). CKD is confirmed when GFR falls below 60 mL/min and albumin levels exceed 30 mg/g of creatinine, along with structural or functional kidney abnormalities persisting for more than three months. ESRD occurs when GFR falls below 15 mL/min.[2,3]

Several chronic conditions contribute to ESRD, with diabetes mellitus being the leading cause in many developed and developing countries. Other risk factors include hypertension, vascular and glomerular diseases, and cystic kidney disorders,[4] tubulointerstitial diseases,[5] urinary tract obstruction, recurrent kidney stones,[6] and certain medications such as Nonsteroidal Anti-Inflammatory Drugs (NSAIDs) and calcineurin inhibitors.[7]

Patients with ESRD often experience various symptoms, such as fluid overload, treatment-resistant hypertension, anemia, and metabolic disturbances, including elevated potassium levels and calcium-phosphorus imbalance.[8] These complications can lead to serious health issues, including fatigue, cognitive difficulties, and decreased quality of life.[9] Chronic renal failure (CRF) refers to the irreversible and progressive loss of kidney function.[10] The onset and progression of CKD can significantly impact

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patients' quality of life and increase the risk of premature mortality.[11] As the population grows and the prevalence of chronic diseases such as diabetes and hypertension rises, the global incidence of CKD is also increasing, which imposes substantial financial burdens on patients and healthcare systems.[12]

In the United States, over 10% of adults (roughly 20 million people) suffer from CRF[13], while in Iran may reach up to 20%.[13] Most CRF patients require replacement therapy, including hemodialysis or kidney transplantation.[10] In Iran, hemodialysis is the dominant treatment option, which can improve patients' quality of life and reduce complications associated with kidney failure when performed effectively.[14] Nevertheless, despite advances in hemodialysis technology, risks associated with hemodialysis persist.[15,16]

CKD patients, particularly those undergoing hemodialysis, frequently report lower quality of life.[17] Physical well-being and overall functionality are especially affected.[18] The World Health Organization (WHO) defines quality of life as individuals' perceptions of their position in life, considering cultural contexts and personal goals.[19]

A reciprocal relationship exists between disease and quality of life; physical impairments directly impact well-being. Chronic illnesses can lead to significant lifestyle changes, reduced productivity, weakness, fatigue, social isolation, and feelings of hopelessness.[20] Despite a substantial population of CKD patients and those on dialysis, relatively few studies have focused on quality of life and interventions for its improvement.[21]

Quality of life is broad and dynamic, shaped by cultural, social, and individual factors. The WHO defines it as individuals' perceptions of life circumstances relative to their goals, expectations, and needs.[22] The quality of life of CKD patients is a critical concern. As a progressive condition requiring ongoing treatment, CKD can significantly affect patients' overall well-being. Given its importance, this research explored the quality of life and the factors influencing it among CKD patients attending Imam Khomeini and Imam Reza hospitals in Kermanshah between 2023 and 2025.

Methods

Study Population

This cross-sectional study was conducted among patients diagnosed with CKD attending two primary dialysis centers in Kermanshah, a city in western Iran. Kermanshah, the provincial capital, has a population of approximately one million and is strategically located near the border with Iraq. The dialysis centers at Imam Khomeini (RA) and Imam Reza hospitals serve as the main treatment facilities in the region, providing essential care to patients with renal failure.

Data for this research were sourced from a specialized registry that collects comprehensive information on patients with ESRD. This registry utilized a meticulously designed checklist covering demographic details, medical history, targeted clinical outcomes, diagnostic results, disease-related complications, medication regimens, and therapeutic interventions. Data were collected using structured questionnaires with checklists and standardized instruments, with a trained professional ensuring reliability and accuracy of the information recorded.

Measurements

Quality of Life

This study utilized the World Health Organization Quality of Life-BREF (WHOQOL-BREF) questionnaire, a robust 26-item instrument designed to assess an individual's overall quality of life across multiple domains. Developed by the WHO in 1996, the questionnaire encompasses four key subscales: Physical Health, Psychological Health, Social Relationships, and Environmental Health, in addition to providing a general quality of life score. Scores are categorized into three levels: low (12-20), moderate (20-40), and high (above 40). The Persian version of the WHOQOL-BREF demonstrates strong psychometric properties, with a Content Validity Index (CVI) of 0.85 and a Cronbach's alpha of 0.75, affirming its reliability and appropriateness for the target population.[23]

Social Support

Perceived social support was measured using the Multidimensional Scale of Perceived Social Support (MSPSS), a 12-item scale assessing support from family, friends, and significant others. Scores range from 12 to 60, with traditional categorization into low (12–20), moderate (20–40), and high (above 40). In this study, scores below 24 were not observed; therefore, social support was reclassified into two categories: present (yes) and absent (no), ensuring alignment with the available data distribution. The Persian version of the MSPSS has been rigorously validated, confirming its reliability and effectiveness in capturing perceived social support within the study population.[24]

Economic Status

Economic status was assessed through a self-reported questionnaire, categorizing participants into poor, moderate, and good based on financial stability and ability to cover essential expenses.

Other Covariates

Occupation, marital status, and education level were documented using structured survey items to ensure consistency in data collection. Smoking history was assessed through self-reported questionnaires, categorizing participants as current, former, or non-smokers. Smoking frequency was further classified as light (3–5 times daily) or heavy ($\geq$6 times daily), allowing for a detailed evaluation of its potential impact on quality of life.

Statistical Analysis

Data were analyzed using Stata software, version 18

(StataCorp, College Station, TX, USA). Descriptive statistics were employed to summarize and describe the variables effectively. The Kolmogorov-Smirnov test was applied to assess the normality of quality-of-life and social support scores. Independent t-tests were used to compare two-group differences, while one-way ANOVA was applied to compare multiple groups. Spearman correlation tests and univariate (crude) and multivariate (adjusted) linear regression models were also applied to investigate the relationships between social support and quality of life.

The dose-response relationship between social support and quality of life was analyzed using both linear and nonlinear regression models to determine how incremental changes in social support influence quality-of-life outcomes. This approach also allowed for identifying potential threshold effects and nonlinear trends, ensuring methodological rigor in quantifying the association between exposure (social support) and impact (quality of life). To more effectively illustrate the distribution of quality of life components, each subscale was standardized using z-scores across varying levels of social support. This ensures comparability across different scales and enhances the interpretability of the dose-response relationship depicted in Figure 2. Additionally, sensitivity analyses were conducted to compare linear and nonlinear models, verifying the most accurate representation of this relationship. A significance level of less than 0.05 was considered statistically significant.

Results

This study analyzed 262 patients with chronic kidney disease, of whom 59.5% (156 individuals) were male. The mean age was 53.4 ± 16.4 years, ranging from 24 to 93 years. Among = participants, 77.1% were married, and 38.5% had an education below a diploma. Economic assessments indicated that 17.2% of patients reported weak financial status, while 63% were classified as having a moderate economic situation. Additionally, 16.8% (44 individuals) were supported by welfare organizations, and among 218 individuals not receiving support, 16% expressed interest in such assistance.

In terms of smoking behavior, 25.6% (67 individuals) had a history of smoking, with 64.2% (43 individuals) currently smoking. Among these, 34 people (50.7%) smoked six or more times daily. The average age of smoking initiation was 24.5 ± 5.2 years, ranging from 16 to 35 years.

Regarding quality of life, 7.6% (20 individuals) reported poor quality, while 92.4% (236 individuals) reported moderate quality of life. The mean quality of life scores were 41 ± 4.5 for men and 40.5 ± 4.4 for women, with no significant difference. Furthermore, 32.8% (86 individuals) reported low levels of social support, which was significantly correlated with variables such as economic status, occupation, and marital status (Table 1).

The total social support score among participants was 42.29 ± 5.65, ranging from 24 to 49. The physical health subscale averaged 50.61 ± 10.27(range: 25-71.43), while mental health had a mean of 56.28 ± 5.21 (range: 41.67-66.67). Social relationships scored 54.42 ± 12.26 (range: 25-75); environmental health had an average of 48.39 ± 6.70 (range: 28.13-71.88), and general health had a mean of 42.70 ± 9.08 (range: 12.5-62.5) (Table 2).

The study revealed significant direct relationships between social support and various health subscales. Specifically, social support was positively correlated with physical health ($P < 0.001$, r = 0.297), social relationships ($P < 0.001$, r = 0.513), environmental health ($P < 0.001$, r = 0.345), and overall quality of life and general health ($P < 0.001$, r = 0.296). In contrast, no significant relationship was observed between mental health and social support ($P = 0.99$, r = 0.005).

Furthermore, analysis indicated that gender, age group, marital status, education level, economic status, smoking behavior, and social support significantly influenced overall quality of life scores. However, these impacts were not predominantly observed across key subscales.

The results of the multivariate regression analysis revealed that various factors significantly influence the quality of life among patients with ESRD. Women reported lower quality of life scores than men (β = -2.67, 95% CI: -4.69, -0.65). In contrast, individuals aged 41-60 reported higher quality of life scores (β = 2.09; 95% CI: 0.58, 3.59). Regarding marital status, widows (β = -2.03; 95% CI: -5.26, 1.20) and married individuals (β = -0.74; 95% CI: -2.26, 0.79) showed lower scores compared to the overall sample population.

In terms of educational attainment, those with a diploma (β = -3.32; 95% CI: -7.17, 0.53) and university degrees (β = -1.15; 95% CI: -4.02, 1.72) exhibited slightly lower quality of life scores. Occupational status was similarly detrimental, particularly for employees (β = -3.23; 95% CI: -6.47, 0.01) and farmers (β = -6.44; 95% CI: -9.83, -3.04).

Conversely, positive economic status is associated with enhanced quality of life (β = 2.42; 95% CI: 0.83, 4.02 and β = 2.48; 95% CI: 0.50-4.46). Finally, social support positively affected quality of life (β = 2.86; 95% CI: 1.77-3.95). These findings underscore the critical influence of social and economic factors in shaping the quality of life among ESRD patients (Table 3).

The dose-response relationship between social support and quality of life reveals a positive trend, with scores

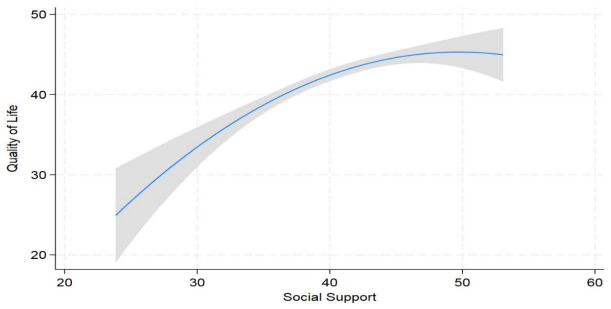

Figure 1. Relationship Between Social Support and Quality of Life

Table 1. Comparison of the Mean Quality of Life and Social Support Based on Demographic Variables

Variable		Frequency (%)	Social Support		Quality of Life	
			Mean ± SD	*P*-value	Mean ± SD	*P*-value
Total		**262(100)**	**42.29 ± 5.65**		**50.48 ± 5.86**	
Sex	Male	156(59.5)	42.4 ± 5.4	0.638	50.76 ± 5.86	0.344
	Female	106(40.5)	42.1 ± 5.6		50.08 ± 5.88	
Age Group	≤40 years	67(25.6)	41.5 ± 4.8	0.163	49.42 ± 5.69	0.01
	41-60 years	109(41.6)	42.7 ± 5.9		51.75 ± 6.26	
	≥60 years	86(32.8)	42.2 ± 5.9		49.70 ± 5.23	
Marital Status	Single	51(19.5)	41.9 ± 5.4	0.046	50.47 ± 5.28	0.36
	Married	202(77.1)	42.5 ± 5.6		50.61 ± 6.04	
	Widowed	9(3.4)	39.5 ± 5.6		47.75 ± 5.03	
Education Level	Illiterate	41(15.6)	41 ± 6.5	0.365	49.77 ± 6.89	0.365
	Under diploma	101(38.5)	42.2 ± 6.1		51.82 ± 3.74	
	Diploma	96(36.6)	42.6 ± 5.04		50.59 ± 7.10	
	Academic	24(9.2)	43.2 ± 3.8		50.04 ± 6.67	
Occupation	Homemaker	86(32.8)	42 ± 6.0	<0.001	52.81 ± 4.00	<0.001
	Employee	19(7.3)	44.1 ± 2.6		48.03 ± 5.85	
	Part-time job	7(2.7)	38.7 ± 10.2		53.17 ± 4.60	
	Unemployed	54(20.6)	43.9 ± 3.8		52.81 ± 4.00	
	Retired	55(21.0)	43.3 ± 5.2		50.05 ± 4.94	
	Farmer	41(15.6)	42.9 ± 6.6		45.72 ± 6.10	
Economic Status	Poor	45(17.2)	39.7 ± 6.9	<0.001	47.62 ± 5.51	<0.001
	Moderate	165(63)	42.5 ± 5.2		50.78 ± 6.09	
	Good	52(19.8)	43.5 ± 5.1		52.02 ± 4.59	
Support Organization	Yes	44(16.8)	43.5 ± 7.7	<0.001	49.11 ± 6.18	0.01
	No	218(83.2)	39.7 ± 7.01		50.95 ± 5.70	
Smoking History	Yes	67(25.6)	41.5 ± 6.07	0.088	47.37 ± 6.36	0.02
	No	195(74.4)	42.5 ± 5.5		52.00 ± 4.96	
Currently Smoking (n = 67)	Yes	43(64.2)	41.5 ± 6.3	0.99	50.76 ± 5.86	0.05
	No	24(35.8)	41.5 ± 5.8		52.08 ± 5.88	
Smoking Frequency (n = 67)	3-5 times	33(49.3)	42.4 ± 5.4	0.171	48.42 ± 5.69	0.17
	6 or more times	34(50.7)	40.6 ± 6.6		50.75 ± 6.26	

increasing steadily as social support ranges from 20 to 60. This upward trajectory peaks at a threshold of 40, after which a slight decline is observed beyond this point (Figure 1).

Figure 2 illustrates the association between standardized scores and social support across various health domains. The graph demonstrates a positive correlation between social support and all quality-of-life components, including physical health, mental health, social relationships, environmental health, and general health, with each domain exhibiting varying slopes. Notably, social relationships display the steepest increase, emphasizing the strong connection between interpersonal support and well-being. The confidence intervals further indicate the reliability of these trends, reinforcing the role of social support as a critical determinant of health. These findings underscore the importance of fostering supportive networks to enhance

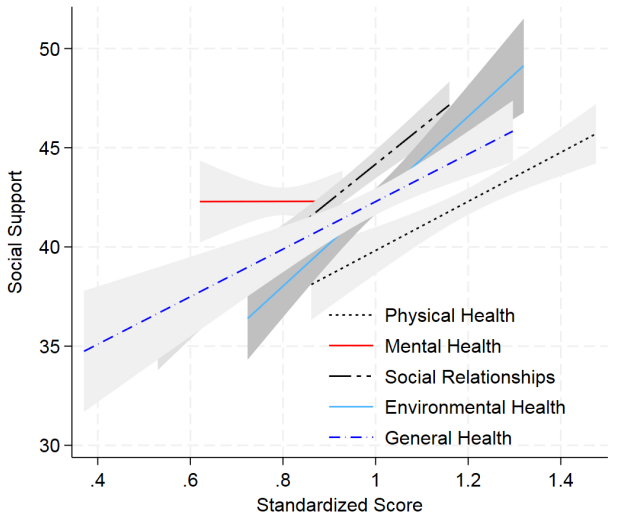

Figure 2. The Dose-Response Relationship Between Social Support and Quality of Life Across Key Subscales

Table 2. Comparison of Mean Quality of Life in Subscales According to Demographic Variables

Variables		Physical Health	Mental Health	Social Relationships	Environmental Health	Overall Quality of Life and General Health
Total		50.61±10.27	56.28±5.21	54.42±12.26	48.39±6.70	42.70±9.08
Sex	Male	50.6±10.5	56.8±5.3	55.4±11.5	48.5±6.6	42.39±9.37
	Female	50.6±9.9	55.4±4.9	52.9±13.3	48.2±6.8	43.16±8.65
Age group	≤40 years	50.8±9.6	55.4±5.5	53.2±11.8	46.2±5.8	41.42±10.25
	41-60 years	52.9±9.9	56.2±5.2	54.8±13.5	50.5±7.2	44.27±8.93
	≥60 years	47.4±10.3	57±4.8	54.8±11	47.4±5.8	41.72±8.05
Marital Status	Single	53±7.4	55.2±5.4	51.8±12.4	48.5±6.5	43.87±7.23
	Married	50.4±10.6	56.4±5.1	55.3±12.3	48.4±6.8	42.45±9.51
	Widowed	40.4±11.3	58.8±4.4	50.9±9.7	46.8±5.4	41.67±8.84
Education Level	Illiterate	48.7±12.3	55.6±4.9	53.4±11.5	48.2±7.8	41.77±10.68
	Under diploma	50.6±10.3	57.2±4.2	53.4±13.3	47.4±6.4	41.25±9.16
	Diploma	51.1±9.6	55.2±5.8	55.9±12.4	49.2±6.4	40.05±7.82
	Academic	51.7±8.7	55.7±5.9	54.2±7.4	49.2±6.1	41.67±12.01
Occupation	Homemaker	50.9±10.8	55.6±4.8	54.2±12.7	48.5±7.3	41.25±9.16
	Employee	54.1±9.9	57±6.2	58.3±4.8	49.2±5.6	42.37±11.01
	Part-time job	48.4±1.9	58.9±4.4	53.5±12.6	44.6±6.6	41.77±10.68
	Unemployed	53.9±6.9	57.1±4.9	58.7±10.7	45.7±6.9	41.67±12.01
	Retired	46.3±11.4	56.3±5.5	57.6±11.7	48.6±6.2	43.75±6.85
	Farmer	45.3±12.6	59.2±1.7	50±10.4	45.3±5.5	43.75±9.82
Economic Status	Poor	49.6±9.9	54.9±5.6	47±12.4	44.5±6.7	41.94±10.03
	Moderate	51±10.6	56.4±5.2	55.2±12.07	48.7±6.6	42.42±9.33
	Good	50±9.4	57.2±4.5	58.2±10	50.4±5.3	44.23±7.20
Smoking History	No	46.6±10.9	57.3±4.8	53.3±12.8	46.3±6.6	41.98±10.37
	Yes	51.9±9.6	55.9±5.3	54.7±10.4	49.1±6.6	42.95±8.61
Social Support	No	47.4±11.7	56.5±5.1	46.1±12.3	45.9±6.3	42.57±9.36
	Yes	52.2±9.09	56.1±5.2	58.4±10	49.6±6.5	43.57±7.03

patients' quality of life, particularly among individuals with chronic illnesses such as ESRD.

Discussion

The present study highlights the critical role of social support and economic stability in shaping the quality of life among ESRD patients, underscoring the importance of psychosocial factors beyond clinical treatment. The results of this study align with previous studies conducted in Iran and internationally.[25] While some international studies have reported higher quality-of-life perceptions in ESRD patients, our findings reflect the persistent socioeconomic challenges specific to Iran,[26] suggesting notable variations in healthcare accessibility and the strength of support systems. These insights reinforce the need for targeted interventions, including financial aid programs and enhanced psychosocial support, to improve patients' well-being. Future research should also assess the long-term impact of such interventions in reducing quality-of-life disparities among ESRD patients.[25,26]

Recent studies in Iran and international reviews confirm that social support and economic stability are key determinants of quality of life in ESRD patients. A cross-sectional study in western Iran found that increased social support significantly improved quality of life, while a global review highlighted the need for culturally sensitive tools to better capture patients' lived experiences.[27-29]

In the present study, 32.8% (86 patients) reported moderate social support, while 67.2% (176 patients) experienced high levels of support. In a study by Rambod at Iran University of Medical Sciences, most hemodialysis patients reported an adequate quality of life.[30] Contrary to initial assumptions that hemodialysis patients experience poor quality of life, 92.4% of participants in this study reported a relatively acceptable quality of life. Likewise, Rafii et al highlight that factors such as life stages, age, psychological functioning, cultural attitudes, social support, and self-esteem significantly influence patients' cognitive responses. Those with greater resilience and stronger social support networks adapt more effectively to their illness, thereby reducing the negative impact of chronic disease on their quality of life.[28]

Moreover, a significant relationship was observed between quality of life and economic status, aligning with studies conducted in Shiraz, Iran,[28] and Hong kong.[31] Financial difficulties, such as job loss and treatment costs,

Table 3. Factors Influencing Quality of Life in ESRD Patients: Univariate and Multivariate Regression Findings

Variables		β Crude (95% CI)	β adjusted (95% CI)
Sex	Male	1	1
	Female	-0.51(-1.61, 0.60)	-2.67(-4.69, -0.65)
Age Group	≤40 years	1	1
	41-60 years	1.99(0.65, 3.33)	2.09(0.58, 3.59)
	≥60 years	0.02(-1.38, 1.43)	-0.84(-2.75, 1.07)
Marital Status	Single	1	1
	Married	-0.12(-1.49, 1.26)	-0.74(-2.26, 0.79)
	Widowed	-2.65(-5.83, 0.53)	-2.03(-5.26, 1.20)
Education Level	Illiterate	1	1
	Under diploma	-0.55(-2.37, 1.27)	-1.51(-3.52, 0.50)
	Diploma	0.49(-3.36, 4.33)	-3.32(-7.17, 0.53)
	Academic	1.13(-1.36, 3.62)	-1.15(-4.02, 1.72)
Occupation	Homemaker	1	1
	Employee	1.67(-0.47, 3.82)	-3.23(-6.47, 0.01)
	Worker	-0.80(-4.13, 2.53)	-2.64(-6.51, 1.23)
	Retired	-0.51(-2.21, 1.19)	-3.13(-5.86, -0.39)
	Farmer	-2.57(-5.40, 0.27)	-6.44(-9.83, -3.04)
	Unemployed	-1.61(-3.11, -0.11)	-2.09(-4.38, 0.19)
Economic Status	poor	1	1
	Moderate	2.44(1.00, 3.89)	2.42(0.83, 4.02)
	Good	3.07(1.31, 4.83)	2.48(0.50, 4.46)
Smoking History	No	1	1
	Yes	1.50(-0.38, 3.38)	1.16(-0.74, 3.06)
Social Support	No	1	1
	Yes	3.19(2.10, 4.28)	2.86(1.77, 3.95)

Note. ESRD: End-stage renal disease; CI: Confidence interval.

contributed to a poorer quality of life among hemodialysis patients. Conversely, higher-income patients often reported fewer concerns about expenses[31]. Socioeconomic factors also play a crucial role, with those with lower income levels consistently reporting poorer quality of life.[32] Similarly, studies from the USA, Saudi Arabia, and India[33] noted that underlying health conditions severely diminish the quality of life.

In Indonesia,[34] Sunariyanti et al found that quality of life among CKD patients declined most sharply in financial, occupational, and social domains, especially among those undergoing hemodialysis. Physical limitations were most strongly influenced by age, diabetes status, CKD stage, and duration of treatment. Interestingly, no significant correlation was found between education and marital status, contrasting with findings from Rafiei in Shiraz, Iran,[28] and from Texas, USA,[31] where married individuals reported better quality of life due to spousal support.[31] Given the profound impact of illness on quality of life, future research should compare ESRD patients with healthy individuals. Moreover, it is recommended that healthcare providers refer patients to job placement or rehabilitation centers based on their physical conditions.[28] Government policymakers should also create job support strategies, including flexible working hours and financial assistance for individuals unable to work.

The findings also revealed significant differences in social support based on economic status and occupation, with self-employed and retired patients reporting higher levels of support than unemployed patients. Consistent with findings from Kermanshah, Iran,[35] higher income was identified as a key determinant of quality of life. Furthermore, non-smoking status (1.18 times) and social support (1.2 times) emerged as the most influential factors for improving quality of life.

However, no significant relationship was found between education level and quality of life in this study, which differs from results from Athens, Greece,[36] Sangapore,[37] and Kermanshah, Iran,[35] where higher education was positively associated with better quality of life. Similarly, no significant correlation was found between age and either quality of life or social support in the present study. In contrast, studies from Boroujerd, Iran, reported a negative correlation between age and quality of life,[25] while research conducted in Sangapore,[37] Bahrain,[38] and Kermanshah, Iran,[35] identified age as an important factor affecting quality of life.

This study also revealed a direct relationship between quality of life and social support, with significant correlations observed in the domains of physical health, social relationships, and general health. However, no significant association was found with mental health. These results align with the results of Al_Arabi in USA[29] and Suwalieh at the University of Texas at Austin, USA.[36]

Strengths and Weaknesses of the Study

The strengths of this study include its consideration of multiple demographic and psychosocial variables and the use of trained healthcare personnel for data collection. However, its weaknesses include the relatively small sample size and single-center design.

Conclusion

The observed relationship between social support and certain individual and social characteristics of patients highlights the importance for nurses and other healthcare professionals to recognize and strengthen the supportive resources available to patients. Given the growing number of patients, it is essential to identify the factors influencing this condition to improve their quality of life. Implementing supportive programs through community associations, along with financial assistance, can significantly enhance the living conditions of this patient group. The findings of this study can provide valuable insights for healthcare professionals and policymakers, enabling the development of appropriate strategies to improve the quality of life of these patients by strengthening support in areas where challenges persist.

Further studies should be conducted to identify the factors that enhance these patients' perception of social support. Research with a larger sample size is recommended to improve generalizability. Additionally, comparative studies assessing the quality of life of these patients in relation to healthy individuals are suggested. Further qualitative research should also explore how these patients perceive their own quality of life.

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Authors' Contribution

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Ethical Approval

This study was conducted in strict adherence to the Declaration of Helsinki. Data collection began only after receiving the requisite approvals from the Ethics Committee of Kermanshah University of Medical Sciences (IR.KUMS.REC.1403.335). Informed consent was obtained from all participants before their inclusion in the study. Eligible patients were those clinically diagnosed with ESRD by a qualified nephrologist who voluntarily provided informed consent.

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