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Original Research Article

The Impact of Social Support on Quality of Life in Hemodialysis Patients

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Abstract: *Background:* Chronic Kidney Disease (CKD) is a significant global health issue, with hemodialysis being a critical treatment for patients in its advanced stages. *Objective:* The aim of this study was to explore the role of social support in shaping the quality of life among hemodialysis patients at a tertiary hospital in Dhaka, Bangladesh. *Methodology:* A cross-sectional, balanced group design was used to examine the relationship between QoL and social support among 80 hemodialysis patients. Participants were selected based on specific inclusion criteria (diagnosis of End-Stage Kidney Disease and at least six months of hemodialysis treatment). The study was conducted from January 2023 to January 2023 at a tertiary hospital in Dhaka. Two validated tools, the Missoula-Vitas Quality of Life Index-15 (MVQoLI-15) and the Multidimensional Scale of Perceived Social Support (MSPSS), were employed to assess QoL and social support, respectively. Ethical approval was obtained, and informed consent was acquired from all participants. Data analysis was performed using descriptive statistics and correlation tests (Pearson's r and Spearman's rho). *Results:* The study revealed significant positive correlations between social support from friends and both QoL and overall social support scores. Notably, a positive relationship was found between the MSPSS Total score and the Transcendence dimension of the MVQoLI-15. Participants reported the highest QoL in the interpersonal dimension, with a lower QoL in the well-being dimension. The correlation analysis highlighted that increased social support, especially from friends, was associated with better QoL scores. *Conclusion:* The findings indicate that social support, particularly from friends, plays a significant role in enhancing the quality of life of hemodialysis patients.

Keywords: Chronic Kidney Disease, Hemodialysis, Quality of Life.

Introduction

Chronic kidney disease (CKD) is a significant global health concern, and for patients in its advanced stages, hemodialysis serves as a life-sustaining treatment. While this procedure effectively removes waste products and excess fluids from the blood, it also imposes profound lifestyle changes, leading to both physical and psychological burdens. Hemodialysis patients often experience fatigue, dietary restrictions, financial strain, and dependency on regular medical care, all of which can impact their overall well-being.[1,3] Consequently, understanding the factors that contribute to their quality of life is crucial for optimizing their care and outcomes.

One such critical factor is social support, which has been widely recognized as an essential determinant of health and well-being. Social support encompasses emotional, informational, and practical assistance provided by family members, friends, healthcare providers, and support groups. [4,5] Studies have shown that strong social networks can alleviate stress, reduce anxiety and depression, and enhance adherence to treatment regimens. For hemodialysis patients, social support can also play a pivotal role in coping with the demands of their condition, ultimately influencing their quality of life.[6] Quality of life (QoL) in hemodialysis patients is a multidimensional concept that includes physical health, psychological well-being, social relationships, and overall life satisfaction. Given the chronic nature of kidney disease and the long-term dependency on dialysis, patients often struggle with reduced mobility, limited work opportunities, and emotional distress.

Therefore, assessing and improving QoL in this patient population is a priority for healthcare providers and researchers alike. Identifying the specific ways in which social support enhances QoL can inform targeted interventions to improve patient outcomes.[7,8] Several studies have explored the relationship between social support and QoL in hemodialysis patients, highlighting the positive effects of emotional encouragement, financial assistance, and active involvement of caregivers.[9] However, the extent of these benefits varies depending on individual patient characteristics, cultural backgrounds, and healthcare accessibility. Moreover, insufficient support or social isolation can lead to negative consequences, including poor adherence to treatment, increased hospitalization rates, and psychological distress.

Objective
This study aims to examine the role of social support in shaping the quality of life of hemodialysis patients.

Methodology

Design
This study employed a cross-sectional, balanced group design to assess the relationship between quality of life (QoL) and social support among hemodialysis (HD) patients. The research was conducted from January 2023 to January 2023 at a tertiary hospital in Dhaka, Bangladesh, focusing on HD patients undergoing treatment at the facility.

Data Analysis
Descriptive statistics, including measures of central tendency and dispersion, were used to analyze the demographic characteristics, social support, and QoL scores of the participants. Correlation analyses were conducted using both parametric Pearson's r and non-parametric Spearman's rho to examine relationships between the domains of the two instruments. Statistical significance was set at $p < 0.05$. Data analysis was carried out using SPSS version 19.

Results
The demographic characteristics of the study group revealed several key details. Among the participants, 57.5% were male and 42.5% were female. In terms of education, 12.5% had primary education, 27.5% had secondary education, 42.5% had higher education, and 17.5% held postgraduate degrees. Regarding occupation, 2.5% were unemployed, 15% were employed in the private sector, 20% were civil servants, 10% worked as freelancers, 12.5% were housemakers, and 40% were retired. Concerning their history with hemodialysis (HD), 62.5% had been undergoing HD for less than 4 years, while 37.5% had been on HD for more than 4 years. As for the years since diagnosis, 30% had been diagnosed for less than 4 years, and 70% had been diagnosed for more than 4 years. In terms of marital status, 20% were unmarried, 52.5% were married, 17.5% were divorced, and 10% were widowed.

Table 1: Demographic status of the study group

Demographic Characteristic	Percentage
Gender	
Male	57.5%
Female	42.5%
Education	
Primary	12.5%
Secondary	27.5%
Higher	42.5%
Postgraduate	17.5%
Occupation	
Unemployed	2.5%
Private Sector Employee	15%
Civil Servant	20%

Freelancer	10%
Housemaker	12.5%
Retired	40%
Years on HD	
<4	62.5%
>4	37.5%
Years since diagnosis	
<4	30%
>4	70%
Marital Status	
Unmarried	20%
Married	52.5%
Divorced	17.5%
Widowed	10%

The descriptive statistics for the MVQoLI-15 and MSPSS scales show a range of mean scores across different dimensions. For the MVQoLI-15, the Symptoms dimension had a mean of 5.90 (SD = 9.50), and Function had a mean of 6.00 (SD = 10.20). The Interpersonal dimension had the highest mean of 13.30 (SD = 11.60), while Well-being had a negative mean of -12.85 (SD = 13.80), indicating poorer scores in this area. The Transcendent dimension showed a mean of 10.85 (SD = 12.95). The MVQoLI-15 Total score had a mean of 28.20 (SD = 24.50). For the MSPSS, the Total score was 53.50 (SD = 11.30), with the Family dimension showing a mean of 5.25 (SD = 0.40), Friends a mean of 4.55 (SD = 0.50), and Significant Others a mean of 3.15 (SD = 0.60).

Table 2: Descriptive Statistics for MVQoLI-15 and MSPSS Scales

Dimensions of QoL	Mean	SD
Symptoms	5.90	9.50
Function	6.00	10.20
Interpersonal	13.30	11.60
Well-being	-12.85	13.80
Transcendent	10.85	12.95
MVQoLI-15 Total	28.20	24.50
MSPSS Total	53.50	11.30
Family	5.25	0.40
Friends	4.55	0.50
Significant Others	3.15	0.60

The bivariate correlations between the MVQoLI-15 and MSPSS dimensions, as assessed using Pearson's r, revealed significant positive correlations. The Friends dimension was positively

correlated with both MSPSS Total (r = 0.515, p < 0.01) and MVQoLI-15 Total (r = 0.440, p < 0.01). Additionally, MSPSS Total showed a strong positive correlation with Transcendent (r = 0.515, p < 0.01). MVQoLI-15 Total was also positively correlated with MSPSS Total (r = 0.460, p < 0.01), suggesting that higher levels of perceived social support, particularly from friends, are linked to better overall quality of life scores. All significant correlations are marked with an asterisk (p < 0.01).

Table 3. Bivariate Correlations Between MVQoLI-15 and MSPSS (Pearson's r)

Dimension	1	2	3	4
Friends	0.245	0.440**		
MSPSS Total	0.515**	0.460**		
Transcendent	0.245	0.515**		
MVQoLI-15 Total	0.440**	0.460**		

The bivariate correlations between the MVQoLI-15 and MSPSS dimensions, as measured by Spearman's rho, revealed several significant associations. Notably, the Sig. Others dimension showed a strong positive correlation with Interpersonal (r = 0.40, p < 0.01) and a negative correlation with Well-being (r = -0.62, p < 0.01). The Family dimension was positively correlated with Interpersonal (r = 0.49, p < 0.01), suggesting that family support has a notable relationship with social interaction quality. No significant correlations were observed between Symptoms and other dimensions. All significant correlations are marked with an asterisk (p < 0.01)

Table 4. Bivariate Correlations Between MVQoLI-15 and MSPSS (Spearman's rho)

Dimensions	1	2	3	4	5	6
Sig. Others	0.87	-0.22	0.40**	-0.62		
Family	0.17	-0.08	0.49**	-0.01		
Symptoms						
Function						
Interpersonal						
Well-being						
Significance	0.01 level for					

	correlations marked with **					

Discussion

In this study, we examined the relationship between quality of life (QoL) and social support among hemodialysis (HD) patients, and our findings were compared with those of other similar studies. The demographic characteristics of our study group revealed a relatively balanced gender distribution, with 57.5% males and 42.5% females, similar to other studies that have found slightly higher male representation in hemodialysis populations. For instance, a study found 60% male participants, which aligns with our results.[9] The education level in our study indicated that the majority of participants (42.5%) had higher education, which contrasts with some studies where a larger proportion of patients have lower educational levels, potentially due to socioeconomic factors affecting access to healthcare and education.[10] In terms of occupation, a significant portion of participants (40%) were retired, reflecting the aging demographic typical of hemodialysis patients, which has been reported in other studies.[11] However, the proportion of unemployed individuals in our study (2.5%) was lower than in some global studies, where unemployment among dialysis patients is often higher, due to physical limitations and the inability to maintain regular employment.[12] This discrepancy may be due to the relatively higher proportion of patients in our study with higher education levels, which could potentially facilitate continued employment, albeit in less physically demanding roles.

Regarding the hemodialysis history, our findings indicate that 62.5% of participants had been undergoing treatment for less than 4 years, which is consistent with previous studies that report a similar proportion of newly diagnosed patients in hemodialysis programs.[13] However, 70% of our participants had been diagnosed with chronic kidney disease for over 4 years, which may reflect the increasing prevalence of kidney disease and improved diagnostic technologies leading to earlier detection. The descriptive statistics for the MVQoLI-15 and MSPSS scales revealed interesting results. The **Interpersonal** dimension of QoL had the highest mean score (13.30), which is in line with the findings of other studies that emphasize the importance of social interactions and support in managing chronic conditions. [14] However, the **Well-being** dimension had a negative mean score (-12.85), suggesting a poorer perception of well-being, which is consistent with other studies where patients undergoing dialysis often report lower levels of well-being due to the physical, emotional, and social burdens of the treatment.[15] Our bivariate correlation analysis using both Pearson's r and Spearman's rho provided significant insights into the relationships between social support and QoL. This is consistent with other studies that have found social support, especially from friends and significant others, to be positively associated with better QoL outcomes in chronic disease patients.[15-24]

Conclusion

In our study highlights the significant role of social support, particularly from friends and significant others, in improving the quality of life (QoL) among hemodialysis patients. While factors such as marital status, education, and occupation showed some variability compared to other studies, the results underscore the importance of interpersonal relationships and social networks in managing the physical and emotional challenges of hemodialysis. Despite some limitations, such as the relatively small sample size, our findings suggest that strengthening social support systems could be an effective strategy to enhance the well-being of these patients. Further research with larger, more diverse populations is recommended to explore these relationships in greater depth and develop targeted interventions to improve patient outcomes.

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