

A study to assess the Quality of life of Patients undergoing hemodialysis at Fortis Hospital & kidney institute, Rash Behari, Kolkata

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1. Introduction:

Chronic Kidney Disease (CKD) is a progressive condition characterized by gradual loss of kidney function. Haemodialysis is one of the most commonly used renal replacement therapies that helps remove waste products and excess fluids from the blood.

Although haemodialysis prolongs life, it imposes multiple challenges such as physical discomfort, emotional stress, dietary restrictions, and social limitations. These factors significantly affect the quality of life of patients.

Quality of Life (QOL) is an important indicator of overall well-being and effectiveness of healthcare services. Assessing QOL helps healthcare providers understand patient needs and improve care.

Globally, the incidence of ESKD is estimated to range between 350 and 400 cases per million population annually, with over two million people receiving dialysis worldwide. In India, by comparison, there are an estimated 229 new cases of ESKD per million population each year, and more than 100,000 patients initiate dialysis annually. These figures highlight both the substantial burden of kidney failure in India and the gap in access to renal replacement therapy compared with high-income countries. Beyond survival, patients face significant physical and psychological challenges that hinder daily functioning, making the maintenance of quality of life (QoL) as critical a goal as prolonging life itself.

QoL, according to the World Health Organization (WHO), is how an individual views their living circumstances considering their goals, ambitions, and cultural and value systems. Several factors affect QoL during HD, such as comorbidities, nutritional status, mental health, socioeconomic situations, and access to healthcare services. Malnutrition and protein-energy wasting are common in HD patients, resulting in increased morbidity and mortality rates. Additionally, psychological stress, the forfeiture of social obligations, and reduced autonomy stemming from extended treatment durations and chronic illness may further aggravate the deterioration of QoL.

Problem statement:

“A Study to Assess the Quality of Life of Patients Undergoing Haemodialysis at Fortis Hospital & Kidney Institute”

Need of the study:

Patients undergoing haemodialysis often experience:

- ❖ Fatigue and weakness
- ❖ Anxiety and depression
- ❖ Reduced social interaction
- ❖ Financial burden

Evaluating QOL helps identify problems faced by patients and guides interventions to improve patient care and satisfaction.

Aim:

To assess the quality of life among patients undergoing haemodialysis.

Objectives:

Primary Objective

- ❖ To assess the quality of life among patients undergoing haemodialysis

Secondary Objectives

- ❖ To assess domain-wise QOL (physical, psychological, social, environmental)
- ❖ To find association between QOL and selected demographic variables

Research questions

Hypotheses:

- H_0 : No significant association between QOL and selected demographic variables
- H_1 : Significant association exists.

Significance of the study

The study provides evidence-based guidance for nursing administrators & educators to enhance quality & safety in specialized nursing care areas.

2. Review of Literature

Introduction to Literature Review

A review of literature provides an overview of existing research related to quality of life (QOL) in patients undergoing haemodialysis. It helps in understanding current knowledge, identifying gaps, and supporting the need for the present study.

The literature is organized under the following headings

1. Studies related to quality of life in haemodialysis patients
2. Studies related to physical and psychological impact
3. Studies related to social and environmental factors
4. Studies related to interventions improving QOL

1. Studies Related to Quality of Life in Haemodialysis Patients

A study conducted by Ferrans and Powers developed a conceptual model of quality of life, highlighting the importance of physical, psychological, and social domains in chronic illness.

Another study by Kimmel PL found that patients undergoing long-term haemodialysis had significantly reduced quality of life compared to the general population, especially in emotional and social domains.

A cross-sectional study in India reported that most dialysis patients had moderate to poor quality of life, mainly due to treatment burden and lifestyle restrictions.

2. Studies on Physical and Psychological Impact

Research by Jablonski A showed that fatigue is the most common symptom among haemodialysis patients, affecting their daily functioning.

A study by Theofilou P found that depression and anxiety are highly prevalent among dialysis patients, leading to poor treatment adherence and reduced QOL.

Another study indicated that sleep disturbances, muscle weakness, and dietary restrictions significantly reduce physical well-being.

3. Studies on Social and Environmental Factors

A study by Cukor D highlighted that social isolation and dependency on caregivers negatively affect patients' social life.

Research conducted in tertiary care hospitals showed that strong family support improves coping ability and enhances quality of life.

Environmental factors such as hospital cleanliness, staff behaviour, and comfort during dialysis were found to influence patient satisfaction and overall QOL.

4. Studies on Interventions to Improve Quality of Life

A study by Chan R demonstrated that patient education programs significantly improved self-care practices and quality of life.

Another study showed that psychological counselling reduced anxiety and depression among dialysis patients.

Exercise programs and nutritional counselling were also found to improve physical health and overall well-being.

Research Methodology

1. Research Design

Descriptive cross-sectional study

Setting

Dialysis unit at Fortis hospital & kidney institute.

2. Population & sample

All patients undergoing hemodialysis

3. Sampling technique

Convenience sampling

4. Inclusion criteria:

- ❖ Patient undergoing hemodialysis for more than 3 months
- ❖ Age above 30 years
- ❖ Willing to participate

5. Exclusion criteria:

- ❖ Critically ill patients
- ❖ Patient with psychiatric illness

3. Data Collection Tools

A structured quality of life checklist was used.

Domains covered

1. Physical (fatigue, activity, sleep)
2. Psychological (stress, anxiety, coping)
3. Social (family support, interaction)
4. Environmental (hospital care, comfort)

Scoring

1. Good = 3
2. Average = 2
3. Poor = 1

Interpretation range

Score	Interpretation
11-15	Good
6-10	Moderate
1-5	Poor

4. Discussion

The data reveals that most patients fall within the 45–55 age bracket (58.33%), followed by the 35–45 age group (21.67%). This suggests that a significant portion of the patients requiring haemodialysis are in their middle-to-late adult years. This trend is often consistent with the clinical progression of chronic kidney disease (CKD), which frequently reaches end-stage renal disease (ESRD) during this period of life. Only a small fraction (8.33%) were in the 65–75 age range.

There is a notable gender disparity in the sample, with males accounting for **68.33%** of the participants, compared to females at 31.67%. This higher prevalence in males might be attributed to a higher incidence of underlying risk factors like hypertension or specific lifestyle factors within this specific population.

- An overwhelming majority of the patients are married (95%). This is a significant social finding, as married patients often have access to a primary caregiver or a support system at home, which is crucial for managing the rigorous demands of long-term dialysis treatment.

Interestingly, while 16.67% of patients receive dialysis for 3 hours and 45 minutes, 83.33% (50 patients) are on a 4-hour duration.

The clinical standard for most patients in this study is **3 times per week (75%)**, while 25% receive treatment twice weekly. The higher frequency is generally associated with better clearance of toxins and improved fluid management, reflecting a more intensive care regimen for most of the sample.

Table:1 Demographic Variables

SLNO	DEMOGRAPHIC VARIABLES	FREQUENCY	PERCENTAGE
1	Age (in years)		
	1. 35-45,	13	21.67%
	2. 45-55.	35	58.33%
	3. 55-65.	7	11.67%
	4. 65-75	5	8.33%
2	Gender (Male/Female)		
	1. female	19	31.67%
	2. Male	41	68.33%
3	Marital status		
	Married	57	95.00%
	Unmarried	03	5%
4	Duration of haemodialysis		
	3 hrs 45 min	10	16.67%
	4 hrs	50	25.00%

5	Frequency of dialysis (per week)		
	45 patients	3 times per week	75%
	15 Patients	2 times per week	25%

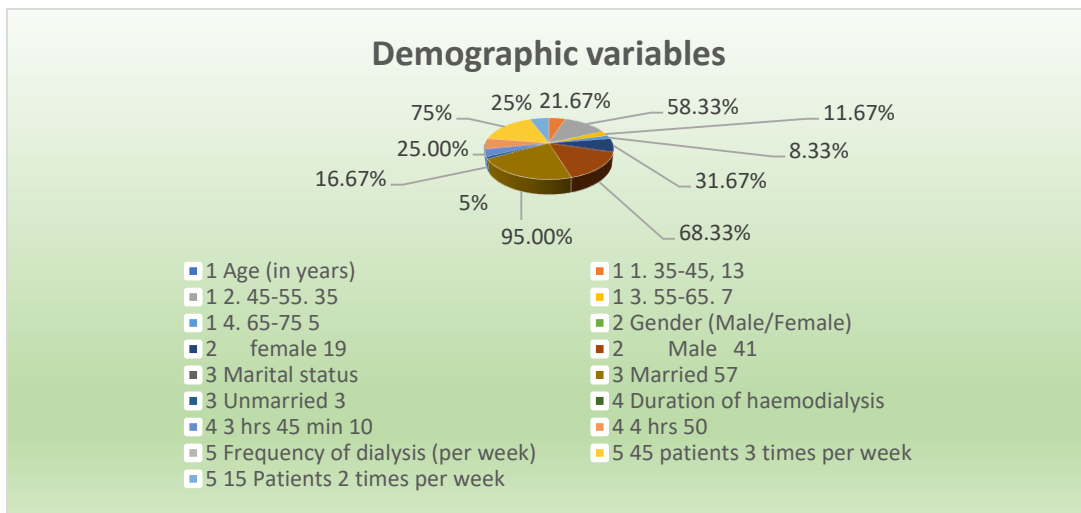


Fig: 1, shows the Percentage number of Demographic variables among hemodialysis patients.

Table 2: Distribution of mean scores and interpretation of quality of life.

Domain -wise analysis revealed that physical and physiological domains had moderate scores, where as social and environmental domains showed good scores, indicating better social support and hospital environment.

DOMAIN	MEAN SCORE	INTERPRETATION
Physical	10.12%	Moderate
Psychological	9.07%	Moderate
Social	12.60%	Good
Environmental	12.50%	Good

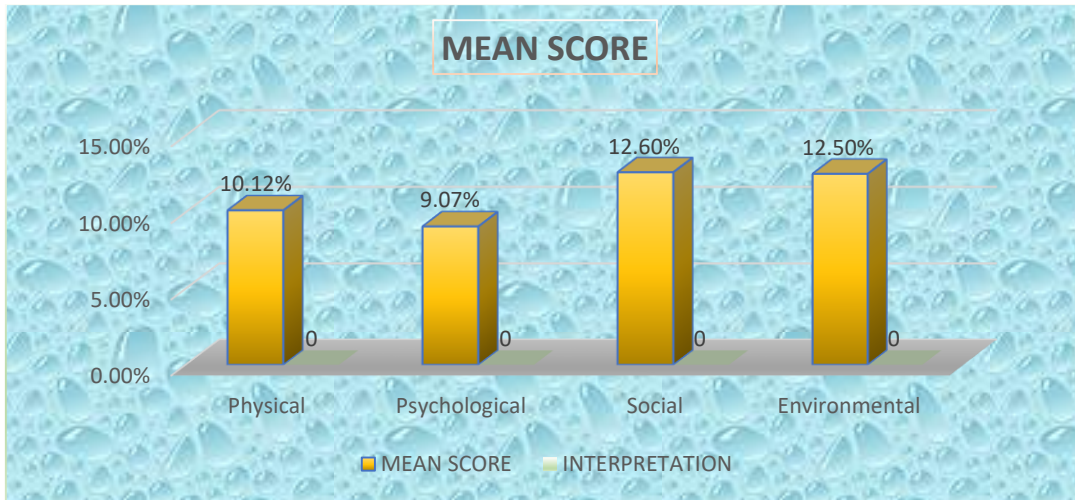


Fig:2, Percentage of mean scores and interpretation of quality of life.

Table :3 Shows the domain -wise Assessment of quality of life among participants.

DOMAIN	Mean ± SD	Median	INTERPRETATION
Physical	10.12 ± 0.21	11.2	Moderate
Psychological	9.07 ± 0.26	10.1	Moderate
Social	12.60 ± 0.39	13.81	Good
Environmental	12.50 ± 0.87	13.46	Good

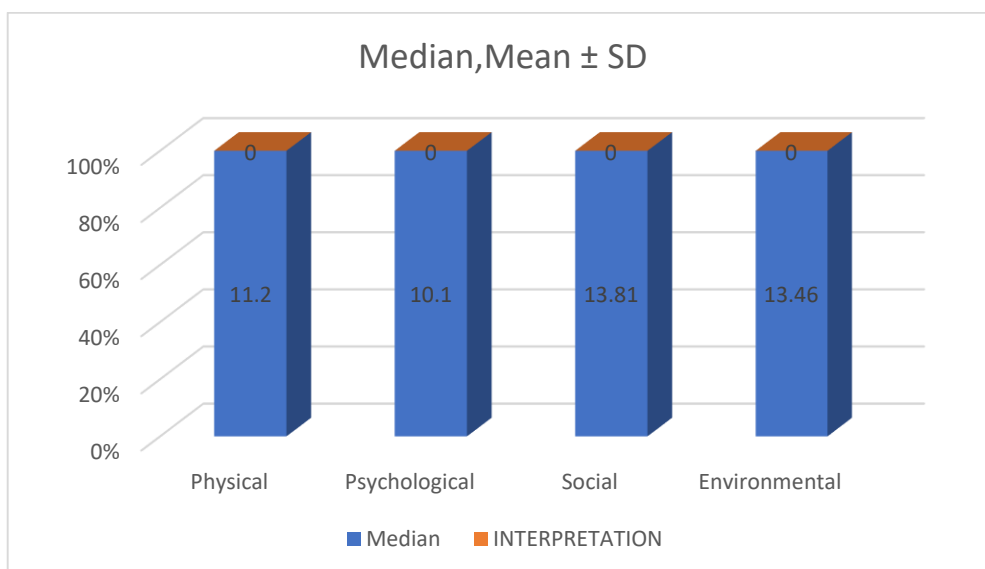


Fig: 3, Represents the comparison of median scores and interpretations across different quality of life domains.

The physical (10.12 ± 0.21) and psychological (9.07 ± 0.26) domains were interpreted as moderate, indicating average physical and mental well-being. In contrast, the social (12.60 ± 0.39) and environmental (12.50 ± 0.87) domains were interpreted as good, showing better social support and environmental satisfaction among participants. Overall, social and environmental domains had higher scores compared to physical and psychological domains.

5. Results:

The present study was conducted to assess the quality of life among patients undergoing haemodialysis. The findings showed that most participants belonged to the 45–55 years age group (58.33%), followed by the 35–45 years group (21.67%). Male participants constituted 68.33% of the sample, while females accounted for 31.67%. Most participants were married (95%), indicating good family and social support. Regarding dialysis treatment, 83.33% of the participants were receiving haemodialysis for 4 hours per session, while 16.67% underwent dialysis for 3 hours and 45 minutes. Most patients (75%) received dialysis three times per week, whereas 25% underwent dialysis twice weekly.

Domain-wise assessment of quality of life revealed that the physical domain had a mean score of 10.12 ± 0.21 and the psychological domain had a mean score of 9.07 ± 0.26 , both interpreted as moderate quality of life. In comparison, the social domain (12.60 ± 0.39) and environmental domain (12.50 ± 0.87) demonstrated good quality of life scores.

The study findings indicate that patients undergoing haemodialysis experience moderate quality of life in physical and psychological aspects, while social and environmental domains are comparatively better. The better scores in social and environmental domains may be due to adequate family support, hospital facilities, and supportive care services.

6. Conclusion & Recommendations

Conclusion

Hemodialysis significantly impacts quality of life. Proper nursing care and patient support can improve the outcomes.

Recommendations:

- ❖ Regular assessment of quality of life
- ❖ Patient counselling services
- ❖ Health education programs
- ❖ Strengthening nursing care
- ❖ Larger studies for generalization

Future Research

Multi Center studies and long-term outcome evaluations are recommended.

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7. Theofilou, P. (2011). Quality of life in patients undergoing haemodialysis or peritoneal dialysis. *Journal of Clinical Medicine Research*. This study links depression and anxiety to poor treatment adherence.
8. Cukor, D., et al. (2007). Psychosocial aspects of chronic disease: ESRD as a paradigmatic illness. *Journal of the American Society of Nephrology*. This work highlights how social isolation and caregiver dependency affect patients.
9. Chan, R., et al. (2009). The impact of education on physical and psychosocial outcomes in haemodialysis patients. *American Journal of Kidney Diseases*. This demonstrated that education programs improve self-care and overall QOL.
10. General Supporting Context The following sources provide the background for your study's introduction:
11. CKD and Treatment: Chronic Kidney Disease is a progressive loss of kidney function, often managed through haemodialysis to remove waste and excess fluid.
12. QOL Importance: Quality of Life (QOL) is a critical indicator of healthcare effectiveness, especially since dialysis imposes physical discomfort, emotional stress, and social limitations.
13. Nursing Impact: Evidence-based studies provide guidance for nursing administrators to enhance safety and care quality in specialized units.
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