

# Quality of Life in End Stage Renal Disease Patients who are Undergoing Hemodialysis

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## Abstract

**Introduction:** Chronic kidney disease and the methods of its treatment play an important part in shaping the patients' quality of life (QOL) who is receiving hemodialysis. As a result, kidney failure causes many limitations in patients' physical, mental, and social activities.

**Aim:** This study aims to assess the perceived QOL among End Stage Renal Failure patients who are receiving hemodialysis.

**Methodology:** A descriptive design was adopted with 30 samples who met the inclusion criteria to conduct the study in the hemodialysis unit. The instrument used for the study was the QOL Index-dialysis version. It describes how satisfied you are with the area of your life and how important this treatment for your life. Subjects were asked to rate their level of satisfaction and the level of importance of 34 aspects of life.

**Results:** The QOL was reported to be satisfactory. The subjects were satisfied with most areas of their lives. The total score of health is  $53.9 \pm 5.26$  in view of important areas whereas in the satisfied area it is  $53.86 \pm 5.01$ . They did not rate the need to get hemodialysis or receiving a kidney transplant as important.

**Conclusion:** The present study suggests that the QOL of end stage renal disease patients undergoing hemodialysis is considerably impaired compared to that of the healthy subjects.

**Keywords:** End stage renal disease, hemodialysis, quality of life

## INTRODUCTION

Quality of life (QOL) has been identified as a significant concern in the end-stage renal disease (ESRD) population.<sup>[1]</sup> ESRD is one such chronic disease causing a high level of disability in different domains of the patients' lives, leading to impaired QOL. Long-term dialysis therapy itself often results in a loss of freedom, dependence on caregivers, disruption of marital, family, and social life, and reduced or loss of financial income. Due to these reasons, the physical, psychological, socioeconomic, and environmental aspects of life are negatively affected, leading to compromised QOL.

There is concern that dialysis treatment is being administered to persons with a limited possibility of survival and poor QOL.<sup>[2]</sup>

## Need for the study

The prevalence of ESRD in India has increased in the last two decades. It has become a global threat with significant morbidity and mortality also it decreases the overall QOL among the affected patients.<sup>[1]</sup> The QOL assessment is an essential element of healthcare evaluation and helps in taking suitable measures to increase the QOL among ESRD patients. The concept of QOL is now important aspect of health care with realization that being well is very important while patient is being treated.

## METHODOLOGY

This descriptive study was conducted at the hemodialysis unit of RVS Tanker Foundation in Coimbatore. Ethical clearance was obtained and 30 patients were selected using

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the Convenience sampling technique. The inclusion criteria for this study were, ESRD patients who were aged 18 years and above of either sex; on regular twice a week of hemodialysis for at least 3 months; able to speak and read the Tamil and English and able to provide informed consent to participate in the study. Patients were excluded if they had malignancies, tumors or multiple organ system failure, any major surgical interventions in the previous 3 months. The instrument used for the study was the QOL Index-dialysis version. It describes how satisfied you are with the area of your life and how important this treatment for your life. Subjects were asked to rate their level of satisfaction and the level of importance of 34 aspects of life.

## Data analysis

### Section-A: Demographic variable

The frequency and percentage distribution of demographic variables are shown in Table 1. 70% of the samples were male and 30% were female, 93% of patients were married and 43% of patients were belonged to the age 46–59 years.

### Section-B: Clinical variables

Table 2 depicts 40% of patients were undergoing hemodialysis for 1–3 years of duration and 27% of patients were in the duration of 3 months to 1 year. About 53% of patients have hypertension followed by 17% of patients were suffering with

diabetes mellitus. Almost all patients were suffered with some comorbid illness.

### Section C: Highest areas of importance and satisfaction ratings

Table 3 shows highest ranked areas of importance in regards with their health ( $5.93 \pm 0.24$ ), Health care they are receiving ( $5.90 \pm 0.30$ ), and dialysis treatment ( $5.83 \pm 0.37$ ). At the same time highest ranked areas of satisfaction in regards with Health care they are receiving ( $5.93 \pm 0.24$ ) followed by their health ( $5.9 \pm 0.39$ ) and dialysis treatment ( $5.83 \pm 0.37$ ).

### Section D: Lowest areas of importance and satisfaction ratings

Table 4 shows the lowest rated satisfaction area are the effort made to increase the potential for successful kidney transplant ( $1.2 \pm 0.4$ ), the potential of getting off dialysis ( $1.43 \pm 0.71$ ), and their sex life ( $1.86 \pm 1.17$ ). The lowest rated important areas are the effort made to increase the potential for successful kidney transplant ( $1.10 \pm 0.30$ ), their sex life ( $1.96 \pm 1.04$ ), and the potential of getting off dialysis ( $1.96 \pm 1.25$ ).

Table 5 shows the mean and standard deviation of various domains in both important and satisfied areas. The total score of health is  $53.9 \pm 5.26$  in view of important areas whereas in the satisfied area it is  $53.86 \pm 5.01$

**Table 1: Frequency and percentage distribution of demographic variable (n=30)**

Demographic variable	Frequency n=30	Percentage
Gender		
Male	21	70
Female	9	30
Age		
<30 years	2	7
31–45 years	7	23
46–59 years	13	43
>60 years	8	27
Marital status		
Single	2	7
Married	28	93
Employment status		
Employed full time	12	40
Employed part time	2	7
Unemployed	15	50
Retired	1	3

**Table 2: Frequency and percentage distribution of clinical variable (n=30)**

Clinical variable	Frequency n=30	Percentage
Duration of dialysis		
3 months–1 year	8	27
1–3 years	12	40
3–5 years	7	23
>5 years	3	10
Co-morbidity		
Hypertension	16	53
Diabetes mellitus	5	17
Hypertension and diabetes mellitus	5	17
Coronary artery disease	4	13

## DISCUSSION

In this study, the perceived QOL of 30 patients performing hemodialysis were assessed. Patients reported that they were very satisfied with most aspects of life that were of most importance to them. The exceptions to this were their family's happiness and their physical independence.

The majority of the samples in the present study were male it is the same statistics which was seen in a study done in Oman.<sup>[3]</sup> In 2012, a descriptive cross-sectional study was conducted in Iran on the QOL of 46 hemodialysis and 46 peritoneal dialysis patients. The study concluded that the leading underlying causes of kidney dysfunction were diabetes and hypertension. The finding was similar in the present study also.<sup>[4]</sup>

The findings of our study are consistent with those of other studies that reported better QOL scores in employed patients in the physical functioning, mental health, and social functioning domains.<sup>[5]</sup> In addition, good mobility, work capability, and very less restriction in daily activities are the main factors contributing to the better QOL scores in the aforementioned domains. Employment of an individual has been found to be a vital factor improving the QOL of ESRD patients.<sup>[6]</sup>

In the present study observed a significantly lower QOL score in health domain in patients who had undergone dialysis. Health-related QOL in hemodialysis patients is dramatically lower than other domains is noticed in this study done by Mapes *et al.*,<sup>[7]</sup> Yang *et al.* correlated the low score in the social

**Table 3: Highest-ranked areas of importance and satisfaction ratings**

Areas	Important rank	Mean±SD	Satisfaction rank	Mean±SD
Their health	1	5.93±0.24	2	5.9±0.39
Health care they are receiving	2	5.90±0.30	1	5.93±0.24
Dialysis treatment	3	5.83±0.37	3	5.83±0.37
Their children	4	5.43±0.80	5	5.36±1.04
Their families happiness	5	5.26±1.09	7	5.03±0.96
Family's health	6	5.16±1.15	4	5.43±0.91
Personal faith in God	7	5.03±1.32	6	5.06±1.48
Home	8	4.90±1.27	8	4.86±1.08
Neighborhood	9	4.80±1.24	10	4.5±1.17
Physical Independence	10	4.73±1.03	-	-
Emotional support from others	-	-	9	4.55±0.76

SD: Standard deviation

**Table 4: Lowest ranked areas of importance and satisfaction ratings**

Areas	Satisfaction rank	Mean±SD	Important rank	Mean±SD
Their education	25	3.46±1.08	27	3.23±1.08
Achievement in personal goals	26	3.23±0.84	-	-
The amount of stress in their life	27	3.23±1.3	28	3.06±1.41
Their job	28	3.03±1.53	26	3.27±1.36
Their potential for happy old age retirement	29	2.62±1.12	29	3.06±1.28
Not having a job	30	2.3±1.4	31	2.30±1.50
Relationship with spouse/significant other	31	2.2±1.04	30	2.80±1.42
Their sex life	32	1.86±1.17	33	1.96±1.04
The potential of getting off dialysis	33	1.43±0.71	32	1.96±1.25
The effort made to increase the potential for successful kidney transplant	34	1.2±0.4	34	1.10±0.30
The potential to live a long time	-	-	25	3.43±0.66

SD: Standard deviation

**Table 5: Overall scores of important and satisfied areas**

Domains	Important areas Mean±SD	Satisfied areas Mean±SD
Health	53.9±5.26	53.86±5.01
Social	31.1±6.06	29.10±4.39
Psychological and Spiritual	28.06±2.88	26.66±4.01
Financial	10.95±3.30	23.83±4.88
Overall	156.07±12.49	131.20±11.44

SD: Standard deviation

domain with dissatisfaction with sexual life and feeling less respected which is same as the present study.<sup>[8]</sup>

The final conclusion is, that regarding the overall QOL score, no significant differences were present between our and other studies.<sup>[9]</sup> The main limitation of our study was that all our study patients were undergoing twice-a-week dialysis instead of thrice-a-week dialysis due to economic constraints. The results of this study suggest that the QOL of hemodialysis patients is considerably impaired compared to that of the healthy subjects, especially with respect to the psychological and health domains.

## CONCLUSION

The present study suggests that the QOL of hemodialysis patients is considerably impaired compared to that of the

healthy subjects, especially with respect to the psychological/spiritual domain and health domain.

## CONFLICT OF INTEREST

Nil.

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