

# Quality of life and satisfaction with care among patients undergoing Dialysis treatment

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Quality of life (QOL) has become increasingly important as an outcome measure in the evaluation of dialysis treatments. This cross sectional study was performed to assess the QOL of patients undergoing dialysis treatment and associated factors while focusing satisfaction on care. Interviewer administered questionnaire was administered among 80 patients at Dialysis Unit, Teaching Hospital Karapitiya. Mean (SD) age was 48 years (11.50), 70% was male and 87.5% had undergone hemodialysis. Mean (SD) scores for physical, psychological, social and environmental domains were 43.04 (14.55), 52.14 (15.75), 59.06 (10.62) and 66.88 (5.76) respectively. Gender, marital status and type of dialysis were not significantly associated ( $p>0.05$ ) with the QOL of dialysis patients. There was a significant difference between educational levels and average scores of physical domain ( $p=0.03$ ), social domain ( $p=0.02$ ) and environmental domain ( $p=0.002$ ) except psychological domain ( $p=0.07$ ). There was a significant difference between monthly income and psychological domain ( $p=0.01$ ), social domain ( $p=0.001$ ) and environmental domain ( $p=0.001$ ). Such difference of QOL was not observed among different age groups except social domain ( $p=0.02$ ). The participants' satisfaction on health care services and family support was had at a higher grade (98.8% with health care services, 91.3% with the family support). Current study revealed that dialysis treatment directly affected the QOL mainly on physical and psychological domains and non modifiable factors such as age, level of education and monthly income were significantly affected their QOL. The support provided by the health care team and family members is greater for them during the treatment process. Dialysis treatment is significantly affected to the QOL of patients although they have family support and health care services at optimum level. Therefore, the enhancement of QOL of dialysis patients should be focused on palliative care including both physical and psychological aspects as there is no such effect on modifying the sociodemographic status.

**Keywords;** Quality of Life, Dialysis treatment, Depression

## **Introduction**

Chronic kidney disease (CKD) has become a major public health problem worldwide. Early detection and treatment can often keep chronic kidney disease from getting worse. Therefore timely initiation of chronic renal replacement therapy is important to prevent the complications of CKD. There are major two types of renal replacement therapy in the form of dialysis and renal transplantation. There are two types of dialysis – hemodialysis (HD) and peritoneal dialysis (PD). Dialysis therapy itself often results in a loss of freedom, dependence on caregivers, disruption of marital, family, and social life, and loss of financial income (Shakvith et al., 2008). Due to these reasons, the physical, psychological, socioeconomic, and environmental aspects of life are negatively affected, leading to a compromised quality of life (QOL). According to most of the studies done in other countries QOL of dialysis patients had been affected to clinical outcome of them. QOL need to be evaluated in order to enhance the wellbeing of patients with CKD. This study was designed to evaluate the QOL and associated factors while focusing the satisfaction on care of patients with dialysis therapy.

## **Methodology**

This cross sectional study was performed among 80 adult patients undergoing treatment at Dialysis Unit of Teaching Hospital Karapitiya. Data were obtained using pretested interviewer administered questionnaire including WHOQOL-BREF (each of the domains was scored on scale ranging from 0 to 100). The data collection was performed after obtaining ethical clearance from the Ethical Review Committee of the Faculty of Medicine, University of Ruhuna. Written informed consent was signed from each participant after fully informed prior to data collection. The six weeks of time period was spent for data collection procedure during April- June 2015. SPSS version 20 was used to analyze the data with both descriptive and inferential statistics, Independent t-test and oneway ANOVA tests were performed where appropriate to detect the differences among groups. Statistical significance was set at  $p < 0.05$ .

## **Results and discussion**

The study sample comprised of 80 patients who undergoing hemodialysis or peritoneal dialysis. Among whole population 70% (56) were males and 30% (24) were females. Most of the patients (60%) represented the 40-59 age group. The majority of the population - 92.5% (74) was married and only 7.5 % (6) was single. With regard to educational status of participants 66.3% had studied up to O/L or above. Approximately 20% of the participants had an income which is more than Rs 20000 and 80% of them had an income which is less than Rs 20000 per month. The results reviewed that the majority with CKD patients had a background of hypertension and diabetic mellitus (71.3%). Among participants who were undergoing hemodialysis 55.7% (39) of them was undergoing hemodialysis twice a week and 44.3% (31) was undergoing hemodialysis once a week. When considering the time duration that a patient takes dialysis treatment, 47.5% (38) had undergone dialysis for less than 4 months and only few of them 8.8% (7) had undergone dialysis more than one year.

Majority of sample (87.5% - 70) underwent hemodialysis and 12.5% (10) underwent peritoneal dialysis. Mean age(SD) was 48 years (11.50), 70% were males and 87.5% had undergone hemodialysis. Mean (SD) scores for physical domain, psychological domain, social domain and environmental domain were 43.04 (14.55), 52.14 (15.75), 59.06 (10.62) and 66.88 (5.76) respectively. According to the mean score values the participants had higher mean scores for environmental and social domains than the physical and psychological domains. According to independent t test results there was no

any statistically significant difference between average values of all four domains of hemodialysis patients and peritoneal dialysis patients( $p>0.05$ ).

Table 1 - Difference between HD and PD of four domains of QOL (n=80)

Domain	Minimum	Maximum	Mean	SD	Difference between HD and PD groups (Independent t test) p value
Physical	10.7	75.00	43.0357	14.55333	0.06
Psychological	16.67	79.17	52.1354	15.75840	0.80
Social	16.67	75.00	59.0625	10.62347	0.45
Environmental	50.0	78.13	66.8750	5.76865	0.10

Gender and civil status had not significantly different between among the different domains of QOL ( $p>0.05$ ) according to independent t test results. One way ANOVA test revealed that there was a significant difference between educational levels and average scores of physical domain ( $p=0.03$ ), social domain ( $p=0.02$ ) and environmental domain ( $p=0.002$ ) except psychological domain. Also there was a significant difference between monthly income and average scores on psychological domain ( $p=0.01$ ), social domain ( $p=0.001$ ) and environmental domain ( $p=0.001$ ) and no such difference with age group among domains of QOL except social domain( $p=0.02$ ).

Table 2 – Difference of QOL domains with sociodemographic characteristics (Mean, SD)

Domain	Physical(SD)	Psychological(SD)	Social(SD)	Environmental(SD)
<u>Gender</u>				
Male	44.01 (14.86)	52.90 (16.41)	59.67 (10.02)	66.91 (6.04)
Female	40.77 (13.84)	50.35 (14.27)	57.64 (12.01)	66.80 (5.19)
p value (t test)	0.37	0.51	0.44	0.94
<u>Civil status</u>				
Married	43.44 (14.74)	52.59 (15.90)	59.57 (10.38)	67.23 (5.40)
Unmarried	38.10 (11.88)	46.53 (13.79)	52.78 (12.54)	62.50 (8.61)
p value (t test)	0.39	0.37	0.13	0.05
<u>Educational level</u>				
grade1-5	40.48 (15.66)	43.52 (20.21)	48.14 (15.46)	62.85 (6.14)
grade6-9	49.40 (14.35)	54.40 (16.69)	60.65 (10.62)	67.19 (7.28)
O/L	39.29 (14.25)	50.25 (14.02)	57.11 (7.98)	66.00 (3.82)
A/L	42.65 (12.14)	55.39 (13.64)	65.20 (6.06)	69.85 (5.94)
Graduate	64.29 (5.05)	75.00 (5.89)	75.00 (0.00)	71.88 (0.00)
p value (ANOVA)	0.03	0.07	0.02	0.002
<u>Age groups</u>				
21-29	43.32 (15.51)	48.75 (17.21)	63.33 (9.12)	65.47 (8.26)
40-59	42.78 (14.98)	52.95 (15.22)	56.42 (11.43)	66.93 (4.55)
60-79	45.24 (11.82)	54.51 (15.83)	62.50 (5.61)	69.01 (4.88)
P value (ANOVA)	0.85	0.52	0.02	0.25

Monthly income (Rs)				
5000- 10000	43.80 (15.53)	47.55 (14.29)	55.15 (12.13)	64.43 (5.91)
11000-20000	42.14 (14.17)	51.94 (17.42)	59.17 (7.99)	67.40 (4.76)
21000-30000	40.05 (11.90)	60.42 (10.04)	66.07 (6.08)	70.98 (4.98)
>30000	64.29 (5.05)	75.00 (5.89)	75.00 (0.00)	71.88 (0.00)
P value (ANOVA)	0.17	0.01	0.001	0.001

Contrast to current study, research conducted in Pakistan revealed that environmental domain score was highest than all the other domains in hemodialysis patients and gender, age, marital status, economical status, time consumed in getting HD affect QOL in dialysis patients (Anees et al., 2014). The numerical value of physical domain was higher in peritoneal dialysis patients than hemodialysis patients but there was no any statistically significant difference between hemodialysis and peritoneal dialysis patients. A study conducted in Athens indicated that patients in the HD treatment, compared to PD treatment patients, reported a more compromised QOL in the domains of environmental and social relationships(Theofilou, 2011).

Majority of the sample (98.8%) had a higher satisfaction of health care services regarding dialysis as well as had a higher satisfaction regarding family support in this research study. So this would have mostly affected to continuity of treatment and effectiveness of dialysis treatments. The research study done in Saudi Arabia revealed that high scores were seen in patient satisfaction regarding family support and dialysis staff encouragement in KDQOL-SF instrument (AL-Jumaih et al., 2011).

### Conclusion

Dialysis treatment directly affected the QOL mainly on physical and psychological domains. Non-modifiable socio-demographic status (age, level of education and monthly income) significantly affected patients' QOL. Therefore, the enhancement of QOL of dialysis patients should focus on the palliative strategies rather than modifying their socio-demographic status. End-stage renal disease (ESRD) and its subsequent management can negatively affect the quality of life. Therefore it is important to determine the factors related to healthcare effectiveness, and medical treatment in dialysis patients in order to improve QOL and insight into these problems can help to design new strategies for problem solving. There is also a need to further evaluate effective interventional strategies to enhance health related QOL in CKD patients, including secondary prevention of risk factors, co-existing conditions, educational and psychosocial support and programmes for improved physical activity.

This study alerts us the importance of the diagnosis and treatment of mental health care in dialysis patients. The health professionals responsible for the care provided to this population should ideally be familiar with and trained in the application of the QOL assessment tools, which may be valuable in the global assistance of these patients. There is a need for more studies to assess the QOL of patients who undergoing dialysis treatment in Sri Lanka. It needs to be determined whether standardized instruments used in the developed world are applicable and useful in the Sri Lanka. It is likely that culturally specific instruments will need to be developed and validated in Sri Lanka. However, as ESRD care expands and the number of CKD patients increases, the focus will need to shift from simply prolonging life to providing a better QOL of CKD patients.

## Referances

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