



## QUALITY OF LIFE AMONG RENAL TRANSPLANT RECIPIENTS

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**ABSTRACT**

**Objectives:** The aim of this study was to assess the health problems among renal transplant recipients attending nephrology OPD at Government Medical College Hospital, Kottayam. Additionally, to discover association between the quality of life among renal transplant recipients and selected variables. A quantitative approach with non-experimental descriptive design was used for this study. Basing Betty Neuman's system model theory, 100 renal transplant recipients were studied using non-probability purposive sampling technique. Data collection instruments were socio-personal and clinical data sheet for collecting basic patient information and WHO BREF QOL scale to assess quality of life. Descriptive and inferential statistics were used to analyze data.

**KEYWORDS :** Quality of life; renal transplant recipient

**INTRODUCTION**

Kidney transplantation is the optimal treatment for end stage renal disease. The life expectancy of transplant patients is significantly improved compared to that of age matched wait listed patients on dialysis. Although kidney transplantation prolongs life and improves the quality of life, it remains a chronic illness, in which patients require continued medical follow up for the monitoring of graft function and medication for the rest of their life. The survival of the transplanted kidney is dependent on the prescribed immunosuppressive medications.<sup>18,19</sup>

In public health and in medicine, the concept of health related quality of life is defined as an individual's perception of their position in life in the context of the culture and value systems in which they live and in relation to their goals, expectations, standards and concerns.<sup>1</sup> Physicians have often used health related quality of life to measure the effects of chronic illness in their patients to better understand how an illness interferes with a person's day to day life.<sup>2,3</sup>

Although the health related quality of life advantages of renal transplantation are well established large differences of quality of life are often observed depending on specific transplant cohorts.<sup>4</sup> Life after renal transplantation presents negative aspects as well, such as a strict regimen of immunosuppressive drugs and its related side effects, frequent medical visits, infections, the uncertainty and anxiety concerning rejection episodes and potential loss of the graft.<sup>5,6</sup> Therefore, one of the most important issues for the future of transplantation is clearly specifying the full range of personal, environmental, and clinical factors that negatively influence health related quality of life outcomes. A better understanding of these factors is essential in developing interventions that maximize the health related quality of life in the context of transplantation. The World Health Organization prioritizes health related quality of life improvement for people living with chronic diseases, end stage renal disease patients were concerned by a specific World Health Organization program.<sup>7</sup>

**METHODOLOGY**

A quantitative approach was used for the study. Non experimental descriptive design was the research design for this study. The study was theoretically supported by Betty Neuman's system model theory. A total of 100 renal transplant recipients, attending Nephrology outpatient department in Govt. Medical College Hospital, Kottayam were selected for the study by using non probability purposive sampling technique. The data collection instruments were socio-personal and clinical data sheet for collecting basic patient information. Additionally, WHO BREF QOL scale to assess the

quality of life among renal transplant was utilized. Descriptive and inferential statistics was used to analyze the data.

**TOOLS**

Tools to collect data to assess health problems among renal transplant recipients included:

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Tool 1: Socio personal data and Clinical data sheet.

Section 1.1: Socio-personal data sheet

Section 1.2: Clinical data sheet

Tool 2: WHO BREF QOL

Tool 1: Socio-personal and Clinical data sheet

**It contains two sections:**

**Section 1.1: Socio personal data sheet:** A questionnaire was used for the collection of socio personal data from the renal transplant recipients. It consists of 10 items: age in years, gender, religion, marital status, education, occupation, monthly income, place of domicile, unhealthy habits, and support system.

**Section 1.2: Clinical data sheet:** A questionnaire was used for assessing the clinical data of renal transplant recipients. It consists of 8 items: indication of renal transplantation, duration of transplantation, type of transplantation, presence of comorbidities, delayed graft function, dialysis after renal transplantation, urine output and serum creatinine.

WHO BREF QOL is a standardized tool and it has high reliability. It consists of 26 items. The WHO BREF QOL produces a profile with two individually scored items about an individual's overall perception of quality of life, health and four domain scores. The 4 domains are physical health, psychological, social relationships, and environment. It is scored on a five point Likert scale. Items 3, 4, and 26 are reversely scored. Higher scores indicate a higher quality of life. The technique used for collecting the data was self-reporting.

**Items are categorized based on the domains as follows:**

Domain 1 (Physical health) : 3, 4, 10, 15, 16, 17 and 18

Domain 2 (Psychological) : 5, 6, 7, 11, 19 and 26

Domain 3 (Social relationships) : 20, 21 and 22

Domain 4 (Environment) : 8, 9, 12, 13, 14, 23, 24 and 25

Based on the formula, mean  $\pm$  standard deviation, quality of life, and domains of quality life are categorized as good,

moderately good and poor. The total score is 130.

**The scores are interpreted as:**

- Good :105 – 130
- Moderately good :78 – 104
- Poor :26 - 77

**Domains**

**Physical health**

- Good :31 – 35
- Moderately good :21 – 30
- Poor :5- 20

**Psychological**

- Good :29 – 30
- Moderately good :19 – 28
- Poor :6- 18

**Social relationships**

- Good :14 – 15
- Moderately good :10 – 13
- Poor :3- 9

**Environment**

- Good :36 – 40
- Moderately good :24 – 35
- Poor :8- 23

**RESULTS**

Findings of the study were discussed under the following headings:

- Socio personal data of renal transplant recipients.
- Clinical data of renal transplant recipients.
- Quality of life among renal transplant recipients.
- Association between the quality of life among renal transplant recipients and selected variables.

**Socio personal data of renal transplant recipients**

Majority, 51%, of the renal transplant recipients belonged to the age group of 36-50 years and minority, 1%, belonged ages > 65 years. Most renal transplant recipients, 72%, were males and 28% were females. While considering religion, majority of renal transplant recipients, 71%, were Hindus, 21% were Christians and 5% were Muslims. 52% of renal transplant recipients were married compared to 2% widowed recipients. Secondary level education was acquired by 46% renal transplant recipients to only 3% acquiring primary level education. Half of the renal transplant recipients, 50%, were self-employed or private employees to only 2% being government employees. Family income of less than 5000 rupees was reported among 82% of renal transplant recipients. While 83% of renal transplant recipients lived in rural areas and only 17% were lived in urban areas. An astounding 99% of renal transplant recipients had no unhealthy habits compared to 1% of the recipients exhibiting alcoholism. Lastly, spouses or offspring(s) supported 51% of the renal transplant recipients, while friend(s) or relative(s) supported 5%.

**Clinical data of renal transplant recipients**

Most common indication for renal transplantation was chronic glomerulonephritis at 36% compared to polycystic kidney diseases only at 3%. While considering duration of transplantation, majority of the renal transplant recipients were between 3.6 - 6.5 years, which is at 38% compared to only 9% were between 9.6 – 12 years. Living donor transplantation, 69%, was the most common type of renal transplantation while only 31% being cadaveric transplantation. Majority of renal transplant recipients (40%) had co morbidities like systemic hypertension and 2% had no co morbidities. Renal transplant recipients had no delayed graft function after renal transplantation and remaining 24% had delayed graft

function. Majority (81%) of renal transplant recipients did not receive dialysis after renal transplantation, 11% were received < 1 week dialysis and remaining 8% were received dialysis for > 1 week. Most of renal transplant recipients (95%) had normal urine output and remaining 5% had anuria. Majority of renal transplant recipients (59%) had high serum creatinine, 41% had normal serum creatinine.

**Quality of life among renal transplant recipients**

- Half of the patients (50%) had good quality of life, 40% had moderately good quality of life and 10% had poor quality of life.
- Regarding the domains of quality of life, 79% of recipients had moderately good physical health to 9% having poor physical health. 61% of renal transplant recipients had moderately good psychological health, 22% good, and 17% having poor psychological health. Half of the renal transplant recipients, 51% had moderately good social relationships and 12% had poor social relationships. The data also depicted 71% of renal transplant recipients having moderately good environmental condition, 17% had good, and 12% having poor environmental condition.

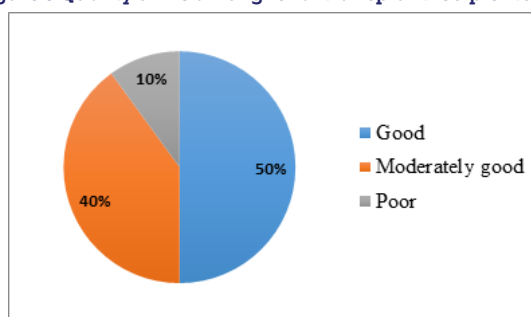
**Association between the quality of life among renal transplant recipients and selected variables**

Chi square was used to find out the association between the quality of life among renal transplant recipients and selected variables like age, gender, educational status, occupation, monthly income, duration, and type of transplantation.

- No correlation was found between quality of life among renal transplant recipients and selected variables.

Hence the study result revealed that selected socio-personal variables were not a significant factor in determining the quality of life among renal transplant recipients.

**Figure 3 Quality of life among renal transplant recipients**



Pie diagram depicts the quality of life among renal transplant recipients. 50% of recipients had good quality of life, 40% had moderately good quality of life, and 10% had poor quality of life.

**Table 1 Frequency distribution and percentage of renal transplant recipients based on domains of quality of life**

n = 100

Domains of quality of life	f	%
Physical health		
Good (31 – 35)	12	12
Moderately good (21 – 30)	79	79
Poor (5- 20)	9	9
Psychological		
Good (29 – 30)	22	22
Moderately good (19 -28)	61	61
Poor (6 -18)	17	17
Social relationships		
Good (14 -15)	37	37
Moderately good (10 – 13)	51	51

Poor (3 – 9)	12	12
Environment		
Good (36 – 40)	17	17
Moderately good (24 – 35)	71	71
Poor (8 – 23)	12	12

Table 1 exhibits the frequency distribution and percentage of renal transplant recipients based on domains of quality of life. Poor physical health was exhibited by 9% compared to 79% recipients exhibiting moderately good physical health. Moderately good psychological health was displayed by 61% of recipients, 22% displaying good, and 17% displaying poor psychological health. 51% of recipients showcased moderately good social relationships to only 12% showcasing poor social relationships. The data also depicts 71% of renal transplant recipients having moderately good environment, 17% good, and 12% being in poor environment.

**Table 2 Mean and standard deviation of domains of quality of life of renal transplant recipients**

n = 100

Domains of quality of life	Quality of life	
	Mean	SD
Physical health (5 – 35)	25.62	4.61
Psychological (6 – 30)	23.96	5.02
Social relationships (3 – 15)	12.30	2.58
Environment (8 – 40)	30.01	5.31

Table 2 shows that physical health domain of quality of life among renal transplant recipients was 25.62 with a standard deviation of 4.61. Mean score of psychological domain of quality of life among renal transplant recipients was 23.96 with a standard deviation of 5.02. Social relationships has a mean score of 12.30 with 2.58 standard deviation. 30.01 was the median score of environment domain of quality of life with 5.31 standard deviation.

**Table 3 The association between quality of life among renal transplant recipients and selected variables**

**H01:** No significant association between quality of life among renal transplant recipients and selected variables was found.

**Table 3 Chi square value of quality of life among renal transplant recipients with selected variables**

n = 100

Selected variables	df	$\chi^2$
Age in years	8	0.35
Gender	2	0.11
Marital status	6	0.10
Education	6	0.24
Occupation	6	0.75
Monthly income	4	0.002
Duration of transplantation	6	0.80
Type of transplantation	2	0.05

The table 3 indicates that the obtained chi square value for age in years, gender, marital status, education, occupation, monthly income, duration, and type of transplantation were not statistically significant. Hence it revealed no significant association between quality of life among renal transplant recipients and selected variables such as age in years, gender, marital status, education, occupation, monthly income, duration and type of transplantation.

**CONCLUSION**

The following conclusions were drawn based on the results. 50% of the patients had good quality of life, 40% had moderately good quality of life and 10% having poor quality of life. While considering domains of quality of life, majority of recipients, 79%, had moderately good physical health, 9% had poor physical health. More than half of renal transplant

recipients, 61%, had moderately good psychological health, 22% had good, and 17% had poor psychological health. The following conclusions were drawn based on the results. 50% of the patients had good quality of life, 40% had moderately good quality of life and 10% having poor quality of life. While considering domains of quality of life, majority of recipients, 79%, had moderately good physical health, 9% had poor physical health. More than half of renal transplant recipients, 61%, had moderately good psychological health, 22% had good, and 17% had poor psychological health. Moderately good social relationship was exhibited by 51% of recipients, 12% exhibiting poor social relationship. The data depicts that majority of renal transplant recipients (71%) had moderately good score in environment domain, 17% good, and 12% having poor score in environment domain. There was no association between the quality of life among renal transplant recipients and selected variables. Similarly, no association was found between the quality of life among renal transplant recipients and selected variables (age, gender, educational status, occupation, monthly income, duration and type of transplantation).

**REFERENCES**

1. Constantiner M, Cukor D. Barriers to immunosuppressive medication adherence in high-risk adult renal transplant recipients. *Dialysis & Transplantation*. 2011 Feb 1;40(2):60-6.
2. Stewart AL, Ware JE, Ware Jr JE, editors. *Measuring functioning and well-being: the medical outcomes study approach*. Duke University Press; 1992.
3. Ortega T, Deulofeu R, Salamero P, Roman A, Masnou N, Rubio S, Garcia O, Casanovas T, Cofan F, Twose J, Ortega F. Health-related quality of life before and after a solid organ transplantation (kidney, liver, and lung) of four Catalonia hospitals. *In Transplantation proceedings 2009 Jul 1 (Vol. 41, No. 6, pp. 2265-2267)*. Elsevier.
4. Fujisawa M, Ichikawa Y, Yoshiya K, Isotani S, Higuchi A, Nagano S, Arakawa S, Hamami G, Matsumoto O, Kamidono S. Assessment of health-related quality of life in renal transplant and hemodialysis patients using the SF-36 health survey. *Urology*. 2000 Aug 1;56(2):201-6.
5. Rebollo P, Ortega F, Baltar JM, Badia X, Alvarez- Ude F, Diaz- Corte C, Naves M, Navascúes RA, Ureña A, Alvarez- Grande J. Health related quality of life (HRQOL) of kidney transplanted patients: variables that influence it. *Clinical transplantation*. 2000 Jun 1; 14(3):199-207.
6. Alavi NM, Aliakbarzadeh Z, Sharifi K. Depression, anxiety, activities of daily living, and quality of life scores in patients undergoing renal replacement therapies. *In Transplantation proceedings 2009 Nov 1 (Vol. 41, No. 9, pp. 3693-3696)*. Elsevier.
7. Tavallani SA, Einollahi B, Farahani MA, Namdari M. Socioeconomic links to health-related quality of life, anxiety, and depression in kidney transplant recipients. *Iranian Journal of Kidney Diseases*. 2009 Jan 1;3(1).
8. Pollice R, Di Mauro S, Bernardini M, Bianchini V, Ussorio D, Roncone R, Famulari A, Casacchia M. Psychopathology, quality of life and social functioning in dialysis treatment and kidney transplantation patients. *La Clinica Terapeutica*. 2010; 161(4):329-33.
9. Gentile S, Beauger D, Speyer E, Jouve E, Dussol B, Jacqueline C, Briançon S. Factors associated with health-related quality of life in renal transplant recipients: results of a national survey in France. *Health and quality of life outcomes*. 2013 Dec; 11(1):88.