Original Article

Quality of Life among Chronic Renal Failure Patients Undergoing Hemodialysis at Teaching Hospital of Province 5

Sunita Acharya

Teaching Assistant, Nepalgunj Nursing Campus, TU, IOM
Correspondence: sunitakohalpur111@gmail.com

ABSTRACT

Introduction: Chronic renal failure is an irreversible progressive condition responsible for high morbidity and mortality of the patients. It requires life-long treatment in the form of renal replacement therapy, the quality of life (QOL) of patients may significantly impair. The objective of study was to assess the quality of life of patients with chronic renal failure undergoing hemodialysis at Teaching Hospital province 5, Banke Nepal.

Methods: Descriptive cross - sectional study design was used among 54 patients using non probability purposive sampling technique. QOL was assessed using the World Health Organization Quality of life (WHOQOL-BREF) questionnaire. Data were collected through interview technique and analyzed by using descriptive and inferential statistics.

Results: Out of 54 patients 57.4% were male and 42.6% female. The mean age was 43.88± 12.56 SD. Out of four domains (Physical, psychological, environmental and social), QOL scores were recorded: over all QOL (64.53±13.22), physical domain (18.98±3.43), psychological domain (15.24±4.079), environmental domain ((18.70±5.39) and social domain (7.66±1.94).The overall quality of life of patients with chronic renal failure undergoing haemodialysis had poor quality of life among 57.40% and high quality of life among 42.59%. There is moderate positive correlation (r=.569) between health satisfaction and quality of life.

Keywords: Chronic kidney disease, Hemodialysis, Quality of life

INTRODUCTION

Quality of life is an important parameter that needs to be addressed in chronic diseases like CKD under going hemodialysis. In recent years kidney related health problem have been emerging as a major public health problem leading to decrease the quality of life. Limited expertise and growing burden of kidney failure is major concern for resource poor country like Nepal. Unlike in the past, when the sole concern was to prolong survival of patients with CKD, equal importance is now being given toward maintenance of QOL (Joshi et al; 2017).

CKD is a major public health problemworldwide and is associated with considerable morbidity and mortality. CKD is a newly

In Nepal, the prevalence of end-stage renal disease (ESRD) is increasing. National Kidney Centre estimated that as much as 10 percent of the populations, 2.6 million people are affected by some kind of kidney disease. Kidney care experts believe that approximately 2600 new ESRD patients are added every year in Nepal (Garofyllou et al; 2017).

Kidney disease is a worldwide public health problem, with increasing incidence and prevalence. The treatment and management

Chronic kidney disease (CKD) is a worldwide public health problem with increasing incidence and prevalence. The treatment and management of kidney disease is expensive and often outcome are poor (Eknoyan et al; 2004). CKD is defined as kidney damage or glomerular filtration rate (GFR) <6ml/

min/1.73m2 for three month or more, irrespective of the cause kidney damage in many kidney diseases can be ascertained by the presence of albuminuria defined as albumin to creatinine ratio >30 mg/g in two of three spot urine specimens (Levey et al; 2002)

Global Burden of Disease study was done during 2013, CKD accounted for 956,200 deaths worldwide, which was approximately 134% increase from that of 1990 (Abubakar, Tillmann, & Banerjee, 2015). Study conducted across 12 countries, including Nepal, showed that the overall prevalence of CKD in Nepal was at 20.1% (Ene-Iordache et al; 2016).

The prevalence of CKD and ESRD is rising rapidly throughout the world, including India. It is estimated that as of 2015, 55,000 Indians are on hemodialysis, with the number rising by 10-20% each year (Jha, 2013).

Dialysis treatment results in prolongation of life for most patients. However, patients on dialysis face limited survival combined with loss of Health Related Quality Of Life (HRQOL) and treatment itself generates considerable burden on daily life in terms of chores to be completed, time taken to obtain dialysis, expense of treatment and hospitalization or complications. (Abdelghany, Elgohary, & Nienaa, 2016).

In the study of 50 CKD at B & B hospital and Blue cross hospital of Nepal reported that, among fifty patients 32 were male (64%) and 18 were female (36%) with mean age of patient 47.14 ± 16.65. out of eight domains studied, energy level, feeling of happiness with life and thought of full energy on self and worming out of life and tiredness perception was found to be equal on pre and post stage. Physical functioning was found to be decreased. Patient on hemodialysis reported improvements in nearly all aspects of general functioning and psychological wellbeing. (Gyawali, Paudel, Chhetri, Shankar, &Yadav, 2013).

Reports of teaching hospital of Chitwan, Nepal study among 96 CKD patient undergoing hemodialysis, the findings showed that higher proportion were from 40-59 years (41.0%) and male (62.2%). The mean ± SD as 57.45± 16.25, 55.72 ±22.41 and 60.04± 11.50 in overall QOL, physical and mental component were slightly above than average. Below

average score were seen in general health (32.86 ± 25.74) and vitality (41.53 ±13.98) sub scale.51.0% respondents said that their general health status were fair, 57.3% respondents said get sick a little easier than other people, 37.5% respondents said as healthy as anybody. (Ghimire & Lopchan, 2017).

The interaction with many patients undergoing hemodialysis revealed that patients are suffering with many psychosocial problems and decreased quality of life. Common problems include changes in body image, dependence of technology and uncertainty regarding the future, feeling of illness, depression, anxiety and social problems like relationship with relatives and friends, job and community roles and responsibilities are probably altered.

METHODS

Descriptive cross-sectional study design was used to find out the quality of life of patient with chronic renal failure undergoing hemodialysis.

The study setting was Nepalgunj medical college teaching hospital in kohalpur Municipality- 11 provinces 5 Banke. All the study population (54 cases) of the hemodialysis patients who has completed the 3 months duration of hemodialysis and willingness to participate were included in the study.

Non probability purposive sampling technique was used and data collection instrument consists of two parts. Part I related to socio-demographic characteristics (age, sex, marital status, educational level, occupation and duration of illness). Part II related to WHOQOL – BREF questionnaire consists of 26 items. Items 1 and 2 assess individuals overall perception of QoL and health and remaining 24 items are categorized under physical, psychological, social relationships and environmental domains. Each item is rated by a 5-point likert's scale. The total items for four domains were twenty four in which highest score are 120 and lowest score is 24. Similarly, Physical domain consists of seven items (7-35), psychological domain consists six items (6-30), environmental domain consists of eight items (8-40) and social domain consists of three items 15 score (3-15). On the basis of the mean score of the domain the quality of the life of the patients are categorised into high and low quality of life. Data were collected through face to face interview technique after ensuring informed

written consent. Confidentiality was maintained throughout the study. Data were analyzed by using Statistical Package for Social Science (SPSS 21) version, descriptive statistics and inferential statistics.

RESULTS

Out of 54 hemodialysis patients, 57.40% were male and 42.59% were female. The mean age was 43.88± 12.56 SD (Table1). Out of four domains, QOL scores were recorded: overall mean score of QOL (64.53±13.22), physical domain (18.98±3.43), psychological domain (15.24±4.079), environmental domain ((18.70±5.39) and social domain (7.66±1.94). On the basis of mean score, 31 having low level of QOL where as 23 having high level of QOL. Similarly, on physical domain 27 patients having high QOL whereas same 27 having low QOL, psychological domain 32 having low QOL followed by 22 were high QOL. On environmental domain, 31 having high QOL where as 23 having low QOL, similarly in social domain 28 having low QOL and 26 having high QOL.

Table 1: Demographic Characteristic of the Respondents   **n=54**

Characteristics	Number	Percentage
Age in years		
18-34	15	27.7
35-60	30	55.55
>60	9	16.6
Mean±SD		
43.88±12.56		
Sex		
Female	23	42.6
Male	31	57.4
Marital status		
Married	52	96.3
Unmarried	2	3.7
Educational level		
Illiterate	19	35.2
Basic level / primary	12	22.2
Secondary	15	27.8
Higher secondary	8	14.8
Occupation		
Employed	333	7.40
Unemployed	50	92.59
Duration of illness		
3 month to 1 yr	29	53.7
>1 yr	25	46.3

Table 2: Perceived Quality of Life of Respondents

n=54

Responses	Not at all N (%)	Not much N (%)	moderately N (%)	great deal N (%)	Completely N (%)
Support from other	38(70.4)	4(7.4)	8(14.8)	3(5.6)	1(1.9)
Responses	**Very poor**	**Poor**	**Neither poor nor good**	**Good**	**Very good**
Rate your life	25(46.3)	15(27.8)	12(22.2)	2(3.7)	-
Responses	**Very dissatisfied**	**Dissatisfied**	**moderate satisfied**	**satisfied**	**Very satisfied**
Satisfy with health	18(33.3)	20(37.0)	8(14.8)	8(14.8)	-

Table 3: Level of Quality of Life of Respondents According to Various Domains

n=54

Domain	Minimum	Maximum	Mean± SD	Low QOL	High QOL
Physical	13.00	28.00	18.98±3.43	27(50%)	27(50%)
Psychological	7.00	24.00	15.24±4.07	32(59.25%)	22(40.74)
Environmental	8.00	27.00	18.70±5.39	23(42.59%)	31(57.40%)
Social	3.00	13.00	7.66±1.94	28(51.85%)	26(48.14%)

Table 4: Overall Level of Quality of Life of Respondents

n=54

Minimum QoL Score	Maximum QoL score	Mean and SD	Low QoL	High QoL
38.00	94.00	64.53±13.22	31(57.40%)	23(42.59%)

Table 5: Correlation between WHO QOL-BREF Score and Demographic Variables

n=54

		Sex	Occupation	Edu. level	Marital status	QoL score	Health Satisfaction
Sex	Pearson Correlation	1	-.017	.419	.169	.275	.311
	Sig. (2-tailed)		.904	.002	.222	.044	.022
Occupation	Pearson Correlation	-.017	1	-.111	-.276	.223	.344
	Sig. (2-tailed)	.904		.422	.044	.105	.011
Edu_level	Pearson Correlation	.419	-.111	1	.141	.189	.326
	Sig. (2-tailed)	.002	.422		.310	.172	.016
Marital status	Pearson Correlation	.169	-.276	.141	1	-.218	-.116
	Sig. (2-tailed)	.222	.044	.310		.114	.402
QoL__score	Pearson Correlation	.275	.223	.189	-.218	1	.569
	Sig. (2-tailed)	.044	.105	.172	.114		.000
Health satisfaction	Pearson Correlation	.311	.344	.326	-.116	.569	1
	Sig. (2-tailed)	.022	.011	.016	.402	.000	

DISCUSSION

Out of 54 patients, majority 55.55% were age above 35 years and 57.4 % were male. The mean age was 43.88± 12.56 SD. The findings of the study was supported by the study done by VK, Parajuli & Sharma, 2013 at B.P. Koirala Institute of health science Dhahran, Nepal that majority 52% were age above 40 years and majorities 72% were male. Similarly, on physical domain mean and SD (18.98±3.43) half (50%) having high QOL and same as (50%) having low QOL, psychological domain mean and SD (15.24±4.07) more than half 32 (59.25%) having low QOL followed by 22 (40.74%) having high QOL, On environmental domain mean and SD (18.70±5.3931) more than half (57.40%) having high quality of life where as 23 (42.59%) having low quality of life, similarly in social domain mean and SD (7.66±1.94) more than half 28 (51.85%) having low QOL followed by 26(48.14%) were high QOL. The findings of the study was supported by the Joshi et al., (2017) at two centre of Nepal reported that psychological domain (51.23±18.61), social domain (49.86±21.64), which states that poor QOL. Similar study was also done by Rana and Shakya, 2017 at Manipal Teaching Hospital and Western Regional Hospital, Pokhara Nepal state that poor QOL but the study was contradicts with the findings with physical domain and environmental domain, physical domain (45.93±16.90) environmental domain (53.17±15.59).

CONCLUSION

Study findings concluded that patients with chronic renal failure undergoing haemodialysis had poor quality of life. When health satisfaction among dialysis patient increase, quality of life is also increase. So the patient health satisfaction activity should be increase to increase quality of life of patient.

ACKNOWLEDGEMENT

Researcher would like to acknowledge to Centre for research TU for supporting for the study.

CONFLICT OF INTEREST: The author declares no conflict of interest

REFERENCES

Abdelghany, M. A., Elgohary, E. E., & Nienaa, Y. A. (2016). Assessment of Health-Related Quality of Life in Patients Receiving Regular Hemodialysis. *Journal of Nephrology & Therapeutics*, *6*(2), 1–4. https://doi.org/10.4172/2161-0959.1000246

Abubakar, I. I., Tillmann, T., & Banerjee, A. (2015). Global, regional, and national age-sex specific all-cause and cause-specific mortality for 240 causes of death, 1990-2013: a systematic analysis for the Global Burden of Disease Study 2013. *Lancet*, *385*(9963), 117-171.

Anu, V.K, Pushpa, P., & K, S. S. (2013). Quality of Life of patients undergoing Haemodialysisat BP Koirala Institute of Health Sciences. Journal of Manmohan Memorial Institute of Health Sciences, 1(2), 19-25.

Eknoyan, G., Lameire, N., Barsoum, R., Eckardt, K. U., Levin, A., Levin, N., & Wang, H. (2004). The burden of kidney disease: improving global outcomes. *Kidney international*, *66*(4), 1310-1314.

Ene-Iordache, B., Perico, N., Bikbov, B., Carminati, S., Remuzzi, A., Perna, A. & Zhang, L. (2016). Chronic kidney disease and cardiovascular risk in six regions of the world (ISN-KDDC): a cross-sectional study. *The Lancet Global Health*, *4*(5), e307-e319.

Garofyllou, G., Kelesi, M., Gerogianni, G., Tsaras, K., Fasoi, G., Kaba, E., & Stavropoulou, A. (2017). Quality Of Life Of Patients Undergoing Hemodialysis. *Doi.Org*, *4*(1), 40–46. https://doi.org/10.5281/zenodo.227102

Ghimire, S., & Lopchan, M. (2017). Quality of life of hemodialysis patients in selected teaching hospitals of Chitwan. *Journal of Chitwan Medical College*, *7*(1), 29-34.

Gyawali, M., Paudel, H. C., Chhetri, P. K., Shankar, P. R., & Yadav, S. K. (2013). Study on quality of life of chronic kidney disease stage 5 patients on hemodialysis. *Janaki Medical College Journal of Medical Science*, *1*(2), 26-31

Jha, V. (2013). Current status of end-stage renal disease care in India and Pakistan. *Kidney International Supplements*, *3*(2), 157-160.

Joshi, U., Subedi, R., Poudel, P., Ghimire, P. R., Panta, S., & Sigdel, M. R. (2017). Assessment of quality of life in patients undergoing hemodialysis using WHOQOL-BREF questionnaire: a multicenter study. *International journal of nephrology and renovascular disease*, *10*, 195.