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Factors Affecting Quality of Life in Heamodialysis Patients in Tertiary Care Hospital

Anamika Ashok Kumar Sharma[1]*, Arezou Ahmadi RA[1], Narendra Bheemraj Parihar[1], Manjusha Sajith[1], Sunil Jawale[2] and Shrinivas Ambike[3]

[1]Department of Clinical Pharmacy, Bharati Vidyapeeth Deemed University, Pune, Maharashtra, India

[2]Department of Nephrology, Bharati Hospital and Research centre, Pune, Maharashtra, India

[3]Department of Nephrology, Jehangir Hospital, Pune, Maharashtra, India

Abstract:

Background: Patients undergoing haemodialysis has poor Quality of Life (QOL). Various studies have shown that level of haemoglobin, socio-economic status, literacy, dialysis program, ethnic groups, sex, comorbidities, malnutrition, depression and unsuccessful previous renal transplant affect quality of life of dialysis patient. There are limited data available that may co-relate the relationship of socio-demographic, clinical variables with QOL domains in Haemodialysis (HD) patients. Hence the present study is in line with these efforts.

Materials and Methods: A prospective observational study was conducted from August 2016 to July 2017 on 131 patients in Haemodialysis unit of Bharati Hospital and Medical Research Centre. Socio-demographic and clinical details were obtained by Self-Predesigned Performa. Quality of life was assessed by WHO-BREF questionnaire. Mann-Whitney U test and Kruskal-Wallis 'H' test were used to analyze the data statistically.

Results: All four domains in male (52.80+13.80), graduated (57.44 $\pm$ 15.10), retired (62.77 $\pm$ 17.03) patients and residing in an urban area (53.96 $\pm$ 14.79) had higher scores as compared to female, primarily educated, employed or unemployed patients and residing in the rural area. As for the increase in duration and frequency of haemodialysis, physical domains were highly affected (47.99 $\pm$ 12.67, 47.45+14.05). Surprisingly increase in the number of pills had a positive effect on physical (48.62 $\pm$ 11.83), social (60.21 $\pm$ 12.13) and environmental (58.40 $\pm$ 12.11) domains.

Conclusion: Marital status, employment status has a negative impact while education, economic and residential has a positive impact on QOL. Interestingly, patients with social habits and increase in duration of haemodialysis, the frequency of haemodialysis and poly-pharmacy had a better QOL.

Keywords: Dialysis; Patients; Haemoglobin; Chronic disease; Patients

Abbreviation: QOL: Quality of Life; RRT: Renal Replacement Therapy; HD: Haemodialysis; ESRD: End Stage Renal Disease; WHO-BREF: World Health Organization Quality Of Life Instrument; IDWG: Inter-Dialytic Weight Gain, HTN: Hypertension: DM-Diabetes Mellitus; CKD: Chronic Kidney Disease; RBC: Red Blood Cells.

Introduction

In practice, haemodialysis is the mainstay therapy which is offered for ESRD patients who cannot undergo renal transplantation. HD ends to be worldwide most employed RRT, involving nearly 90% of ESRD population [1]. This therapeutic impose a considerable burden on both patients and their families through its physical dependence, mental influence, and the myriad symptoms of ESRD which can be also worsened by several other complications. In fact, haemodialysis patients are more likely to develop cardiovascular, skeletal, endocrine, inflammatory, neoplastic [2,3] and psychological complications [4] along with comorbid disorders such as depression (30% of ESRD patients), sexual dysfunction (nearly half of ESRD), and problems with sleep (up to 40%–80%), ranging from insomnia, sleep apnoea to restless leg syndrome, contributes to worse QOL. Various studies have shown that level of haemoglobin, socio-economic status, literacy, dialysis program, ethnic groups, sex, mobility comorbidities, malnutrition, depression and unsuccessful previous renal transplant affect Quality of life of dialysis patient [5]. Lower QOL is associated with the higher rate of hospitalizations and worse survival among dialysis patients, serving as a prognostic measure and predictor for survival.

Quality of Life (QOL), though equally important to assess the quality and outcomes of medical care, is not routinely measured. It plays an important role in improving patient's care, assessing patient's needs, setting treatment goals, monitoring disease progression and helps in developing better plans of care (preventive and treatment strategies).

Health, as defined by World Health Organization, is a broad-ranging concept affected by the person's complex physical health, psychological state, level of independence, social relationships, personal beliefs and their relationship to salient features of their environment [6] WHO-BREF QOL score provides a measurement of functioning and well –being rather than of disease and disorders, hence is more comprehensive and compatible with the WHO's concept of health [7].

While assessing QOL, both subjective and objective information is necessary since they derive distinct types of information. Objective measures may be more suitable for detecting treatment effects, such

as the number of days on dialysis. Subjective information (such as happiness, satisfaction, spiritual and religious beliefs) is also necessary to complete the QOL picture and enhance the interpretation of objective data.

The concepts of QOL and quality-adjusted life years in chronic disease are still emerging in India. There are few published studies dealing with this topic especially ESRD. For the first time in the Maharashtra state of India, we investigated QOL, analysed demographic and clinical factors influencing QOL in depth.

Materials and Methods

A prospective observational study was conducted from August 2016 to June 2017 on 131 patients in Haemodialysis unit of Bharati Hospital and Medical Research Centre which predominately provided with patients from rural areas. The study included adult patients with age above 18 years old and having end stage renal disease. Patients recruited were undergoing continuous haemodialysis for more than three months. Patients with age less than 18 years, with impaired hearing, speech and cognitive disturbances, unable to understand, answer the questionnaires were excluded from this study.

Patient consent form was read for the patients and consent was received in the written form of patient signature. Socio-demographic, subjective and objective details of every patient were noted in self–predesigned patient profile form.

QOL was assessed with WHO-QOL BREF questionnaires. WHO-QOL BREF consists of 24 facets and provided a profile of scores on four dimensions of quality of life: physical health, psychological, social relationships and the environment [8] WHO-QOL BREF questionnaires were scored after its administration to the study subjects, raw scores(obtained from subjects) were converted to transformed score (4-20,0-100). The first transformer converts scores to a range of 4-20 and the second transformation convert to a 0-100 score scale. The questionnaires were translated into local languages i.e. Marathi. A translation was done by a professional translator.

Statistical analysis

Data were expressed as mean, percentage and standard deviation. Kruskal-Wallis 'H' test was used to identify the significant difference in the WHO-QOL domains scores. Comparison of two unpaired groups (e.g.: Age, Gender, Economic Class, Education, Social Habits, Residential area, Duration and Number of hemodialysis, Pills per day) was made using Mann-Whitney U test. Kruskal-Wallis 'H' test was used to compare three unpaired groups i.e. Marital and Employment status. P value was estimated at 95% confidence level and 5% type I error with p<0.05 was considered significant. The data were analyzed using online software.

Results

Out of 131 patients, 50 patients were aged ≥ 60 with mean average age 51.61 + 15.67. Majority of patients were male (72.52 %), married (89.31%), employed (58.02%), belong to middle class (71%) primary educated (45.04 %) and resides in rural areas (58.78%) Figure 1. Although ESRD cause is still unknown, maximum no. of patients had comorbidities like hypertension and diabetes. Patients undergoing twice weekly of hemodialysis with >24 months duration of haemodialysis and >100 number of hemodialysis were found to be (61.00%, 55.73%, 66.42%), respectively. Polypharmacy was seen in 21.37% Table 1. In patients undergoing haemodialysis, haemoglobin was reduced with the

increase in serum urea and serum creatinine value (9.83 g/dL, 100.39 mg/dL and 8.59 mg/dL). Kt/V and IDWG were found to be 1.52+00.18, 02.12+01.21 and 58.02+12.53 respectively Table 2.

Among the four domains, physical parameters (48.36 ± 13.27) were most affected followed by psychological and environmental with the highest score in social domains (55.55+13.48). The average QOL score was found to be 52.50 ± 12.95 (p=0.0037) Table 3.

In patients with age > 60 year old (52.67 ± 14.86) physical domains were found to be affected. All four domains in male (52.80 ± 13.80), graduated (57.44 ± 15.10), retired (62.77 ± 17.03) patients and resided in the urban area (53.96 ± 14.79) had higher scores as compared to females, primarily educated, employed or un-employed patients and resided in the rural area. In case of marital status, married patients had the lowest score in all the three domains except social domains (55.38 ± 14.13) as compared to unmarried and widow patients. High economic class patients have a better quality of life score excluding psychological score (45.67 ± 11.72). Although social habits (52.54 ± 13.33, 54.04 ± 17.91) had a positive impact on overall quality of life yet, physical (48.29 ± 12.52) and psychological (49.72 ± 13.67) domains were more affected in smokers Table 4.

Patients with comorbidities like HTN and DM have poor quality of life i.e. low physical, social, environmental score with the high psychological score (48.35 ± 13.03, 54.87 ± 13.89, 55.05 ± 11.45 and 51.01 ± 13.58) as compared with other comorbidities. As for the increase in duration and frequency of haemodialysis, physical domains were highly affected (47.99 ± 12.67, 47.45 ± 14.05) and there was the only slight difference in overall quality of life. The number of dialysis has the negative impact on the overall quality of life domains except for psychological domain (50.66 ± 13.08). Surprisingly, increase in the number of pills had a positive effect on physical (48.62 ± 11.83), social (60.21 ± 12.13), environmental (58.40 ± 12.11) domains and quality of life (52.45 ± 12.22) Table 5.

Discussion

ESRD is a serious illness and treatment is challenging and life-long. Moreover, despite the substantial resources committed to the treatment of ESRD and considering its influence on clinical outcome and survival in chronically ill patients, they continue to experience a reduced quality of life, Hence, QOL is becoming a promising tool for measuring the benefits and burdens of dialysis therapy from a patient's point of view which involves the way patients manage their health in several domains; physical functioning, physical and emotional roles, social functioning and general health perception.

Caring of all the above aspects that may improve the QOL in patients requiring RRT has become a relevant area of investigation. Several studies have shown dialysis patients are more likely to have compromised physical and emotional functioning in which decrease in physical functioning has been associated with increased risk of death. Similarly, in our findings among the four domains, physical parameters (48.36 ± 13.27) were most affected, followed by psychological domain (50.83 ± 13.27). Environmental and social domains (55.27 ± 11.75, 55.55 ± 13.48) were found to have the highest scores, The overall QOL score observed was 52.50 + 12.95 (p= 0.0037) similar to a study conducted by Georgia et al. in Brazil [9].

Association between demographic characters and QOL:

Age is one of the important predictors of QOL in HD patients. According to Liu et al., age more than forty years is a significant risk
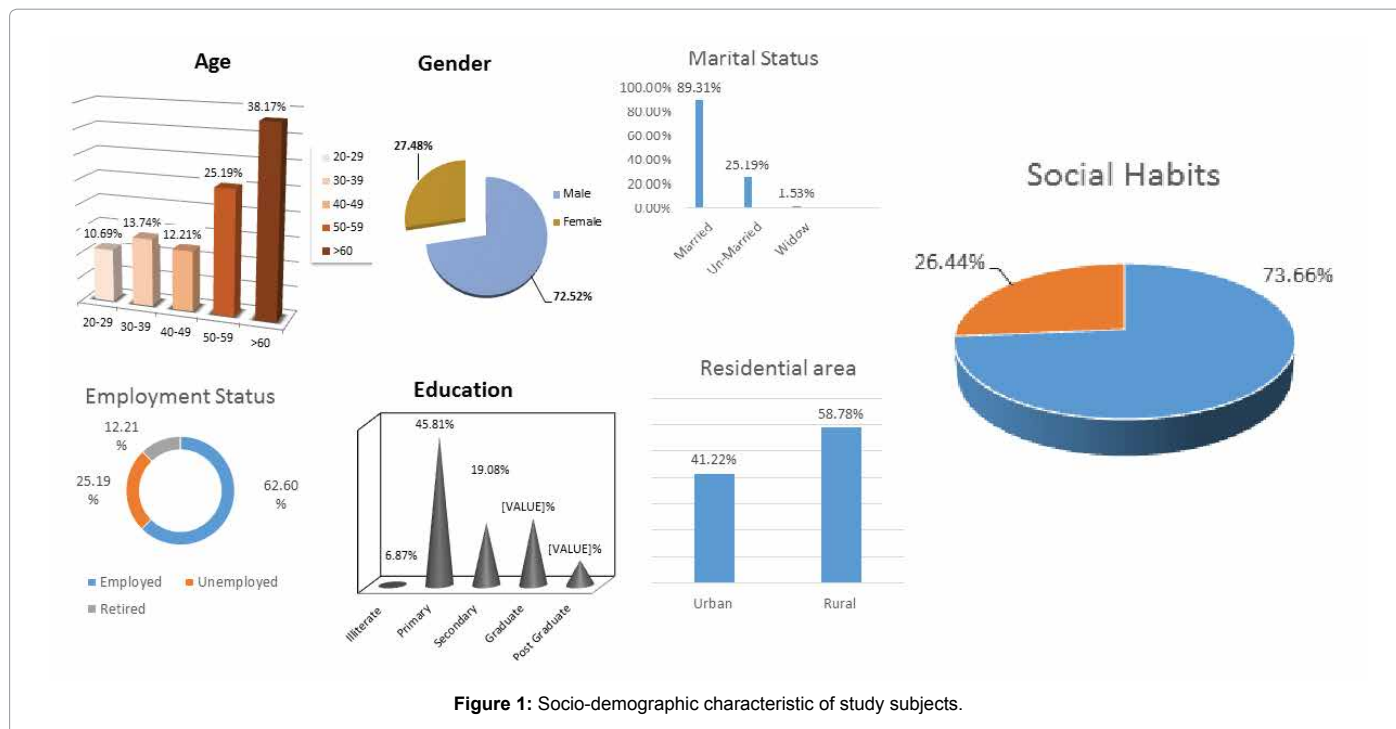
Figure 1: Socio-demographic characteristic of study subjects.

Characteristics	Total Number of Patients N=131 (%)
Co-morbidities of ESRD	
Hypertension+Diabetes	113 (86.26)
Others	18 (13.74)
Duration of Hemodialysis	
Less than 24 months	58 (44.27)
More than 24 months	73 (55.73)
Number of Dialysis	
<100	44 (33.58)
>100	87 (66.42)
Frequency of hemodialysis	
Twice weekly	80 (61.00)
Thrice weekly	51 (39.00)
Pills per day	
0-1	05 (3.82)
1-2	32 (24.43)
2-3	34 (25.95)
3-4	32 (24.43)
≥ 5	28 (21.37)p
Body Mass Index	
Underweight (<18.50)	23 (17.57)
Normal (18.50-24.99)	76 (58.01)
Overweight (≥ 25.00)	20 (15.26)
Obese (≥ 30.00)	12 (09.16)
Supine Blood pressure	
Systolic (mmHg)	151.50 ± 23.94
Diastolic (mmHg)	82 .00 ± 15.28

Table 1: Clinical characteristics of study subjects.

Laboratory Test	Mean	SD	Min	Max
Hemoglobin (g/dL)	9.83	1.29	6	12.1
Serum.Urea (mg/dL)	100.39	26.31	18.00	191.00
Serum.Creatinine (mg/dL)	08.59	05.72	02.50	89.00
Glomerular Filtration Rate	09.01	03.97	00.82	22.06
Blood Urea Nitrogen	46.91	13.36	08.40	89.13
Serum. Sodium (mEq/L)	135.75	09.27	07.33	144.00
Serum. Potassium (mEq/L)	5.35	00.86	03.40	07.50
Serum. Calcium(mEq/L)	5.14	01.99	00.82	01.42
Serum Chloride (mEq/L)	103.81	03.42	99.00	110.00
Serum Phosphorous (mEq/L)	05.43	01.13	02.79	10.30
Kt /V	01.52	00.18	01.07	01.99
IDWG	02.12	01.21	0.10	07.70
Dry Weight	58.02	12.53	38.50	93.20

Table 2: Laboratory characteristics of haemodialysis patients.

	WHO-QOL BREF questionnaire scores			
Domain	**Mean**	**SD**	**Min**	**Max**
I (Physical)	48.36	13.27	25	88
II (Psychological)	50.83	13.28	25	88
III (Social)	55.55	13.48	14	100
IV (Environmental)	55.27	11.75	15	100
General QOL	52.50 ± 12.95			
p-value	0.0037*			
Kruskal-Wallis 'H' Test	* $p < 0.05$ is considered to be statistically significant			

Table 3: Scores of the WHO-QOL BREF questionnaire in hemodialysis patients.

factor for low QOL in HD patients [10]. As the age increases the patient's overall QOL decreases (due to geriatric syndromes such as cognitive impairment, depression and immobility etc. referred as geriatric giants). Hence, care of elderly dialysis patients requires assessment, management and function to maximize independency while minimizing disease and symptoms burden. However, it is interesting to note that in our study, patients greater than 60 years of age show higher quality of life in psychological, social and environmental domains except physical

Variables	N	WHOQOL-BREF questionnaire scores				
		Physical	**Psychological**	**Social**	**Environmental**	**Average**
Age*						
<60 years	81	49.26 ± 12.37	50.09 ± 11.88	54.41 ± 12.08	54.58 ± 10.20	52.08 ± 11.63
>60 years	50	46.84 ± 14.43	51.22 ± 13.96	56.58 ± 17.12	56.05 ± 13.94	52.67 ± 14.86
p-value		0.092	0.764	0.502	0.818	0.744
Gender*						
Male	95	48.93 ± 13.39	50.80 ± 14.44	56.26 ± 14.25	55.23 ± 13.12	52.80 ± 13.80
Female	36	46.82 ± 13.10	50.73 ± 9.28	52.93 ± 13.18	55.21 ± 7.68	51.42 ± 10.81
p-value		0.440	0.808	0.165	0.922	0.641
Marital status**						
Married	117	47.83 ± 13.68	50.36 ± 13.68	55.38 ± 14.13	55.02 ± 12.06	52.26 ± 13.39
Un-Married	12	55.97 ± 7.69	56.00 ± 12.50	53.18 ± 8.64	58.16 ± 11.92	55.83 ± 10.19
Widow	2	47.00 ± 12.72	53.00 ± 4.24	53.00 ± 4.24	56.50 ± 9.19	52.37 ± 7.60
p-value		0.116	0.305	0.771	0.566	0.598
Education*						
Primary	94	45.67 ± 11.22	48.81 ± 11.58	53.70 ± 11.01	53.25 ± 9.74	50.36 ± 10.89
Graduate	37	54.79 ± 14.22	55.40 ± 13.93	59.71 ± 17.42	59.85 ± 14.80	57.44 ± 15.10
p-value		0.00652**	0.01596***	0.0703	0.07508	0.00001***
Economic Class*						
Low- Medium	122	47.89 ± 12.74	50.90 ± 13.19	54.82 ± 13.54	54.58 ± 11.20	52.05 ± 12.67
High	09	49.35 ± 13.89	45.67 ± 11.72	58.64 ± 10.93	59.39 ± 18.41	53.26 ± 13.74
p-value		0.638	0.163	0.239	0.098	0.651
Variables	N	WHOQOL-BREF questionnaire scores				
		Physical	**Psychological**	**Social**	**Environmental**	**Average**
Employment Status**						
Employed	82	46.17 ± 10.91	49.24 ± 13.18	53.11 ± 10.92	52.51 ± 10.74	50.26 ± 11.44
Un-employed	33	48.05 ± 13.25	50.38 ± 8.84	54.40 ± 11.29	55.75 ± 7.39	52.14 ± 10.19
Retired	16	57.77 ± 16.64	58.59 ± 16.83	67.29 ± 18.51	67.44 ± 16.14	62.77 ± 17.03
p-value		0.007***	0.011***	0.001***	0.000***	0.002***
Residential area*						
Urban	54	48.85 ± 14.01	52.14 ± 14.78	56.37 ± 17.00	58.48 ± 13.36	53.96 ± 14.79
Rural	77	47.70 ± 12.43	50.30 ± 11.99	54.54 ± 10.53	52.78 ± 9.62	51.33 ± 11.14
p-value		0.878	0.761	0.448	0.020***	0.409
Smoking Status*						
Non smoker	87	48.41 ± 13.52	51.55 ± 12.93	54.86 ± 12.63	55.02 ± 11.56	52.46 ± 12.66
Smoker	44	48.29 ± 12.52	49.72 ± 13.67	56.36 ± 15.70	55.82 ± 11.42	52.54 ± 13.33
p-value		0.798	0.687	0.184	0.393	0.628
Alcoholic status*						
Non Alcoholic	106	47.85 ± 12.17	51.10 ± 12.08	54.80 ± 11.45	55.14 ± 9.99	52.33 ± 11.42
Alcoholic	25	50.81 ± 16.63	51.86 ± 16.32	56.80 ± 21.89	56.70 ± 17.19	54.04 ± 17.91
p-value		0.299	0.868	0.372	0.984	0.583
* Mann Whitney U Test, ** Kruskal-Wallis 'H' Test, *** p<0.05 is considered to be statistically significant.						

Table 4: Co-relation between socio-demographic characteristics and quality of life.

domain as compared to patients with age less than 60 years old. The low physical health clearly demonstrates that daily activities were disturbed as they were more dependent on the renal replacement treatment for their survival along with dialysis-related factors i.e post-dialysis fatigue and routinely immobile hours spent in a dialysis session agreed with Moreno et al. [11] Similarly, a study reported younger age, shorter time on renal replacement therapy and less comorbidities predicted better physical QOL [12]. However, it seems that younger population could not cope with their condition psychologically, socially and environmentally. In another study done by Tong et al., also adolescent and young adults with CKD showed low QOL values. This could be attributed to their willingness to trade considerable life expectancy for perfect health and holistic care to improve QOL [13].

In the current study, males reported better QOL in all four domains subjects compared to the female patients. The reason behind this may be due to the better social relationships (strong relation and sexual activities) and support in males than females. This observation is in agreement with Merom et al. findings in Palestinian women [14]. In Indian scenario, most of the females put their families above their health. On the other hand, males have more chances of outing and meeting friends who give them encouragement to face challenges of life, hence are less likely to become anxious or depressed compared to females [15].

In relation to marital status, married patients on long-term haemodialysis show low scores in physical, psychological and environmental domains which could be due to various reasons such as breadwinning the whole family and bearing financial stress that contribute to several behavioural changes and lead to negative impact on their affections, closeness, sexual relationship and shared activities which could demolish marital relationship quality experienced by the

Variables	N	WHO-QOL BREF questionnaire scores				
		Physical	Psychological	Social	Environmental	Average
Comorbidities						
HTN-DM	113	48.35 ± 13.03	51.01 ± 13.58	54.87 ± 13.89	55.05 ± 11.45	52.32 ± 12.99
Others	18	49.16 ± 15.14	50.20 ± 11.75	58.33 ± 12.87	56.62 ± 12.87	53.58 ± 13.07
p-value		0.9203	0.888	0.3125	0.5552	0.45326
Duration of Hemodialysis*						
<24 months	58	48.94 ± 14.18	50.26 ± 12.08	54.75 ± 13.60	54.78 ± 11.84	52.18 ± 12.92
>24 months	73	47.99 ± 12.67	51.19 ± 13.78	56.17 ± 14.30	55.57 ± 11.53	52.73 ± 12.86
p-value		0.781	0.847	0.384	0.494	0.727
Number of Dialysis*						
<100	44	50.56 ± 16.24	50.23 ± 14.37	55.38 ± 14.85	57.04 ± 14.64	53.31 ± 15.03
>100	87	48.47 ± 12.32	50.66 ± 13.08	55.33 ± 14.33	54.70 ± 11.05	52.29 ± 12.69
p-value		0.490	0.903	0.895	0.318	0.688
Frequency of hemodialysis*						
Twice weekly	80	49.28 ± 12.49	49.88 ± 14.23	54.25 ± 14.27	54.88 ± 11.28	52.07 ± 13.30
Thrice weekly	51	47.45 ± 14.05	51.78 ± 12.34	56.58 ± 13.56	55.66 ± 12.23	52.87 ± 13.47
p-value		0.197	0.368	0.541	0.960	0.968
Pills per day*						
<5	103	48.57 ± 13.81	51.34 ± 13.72	54.55 ± 14.21	54.82 ± 11.63	52.32 ± 13.34
>5	28	48.62 ± 11.83	50.57 ± 12.80	60.21 ± 12.13	58.40 ± 12.11	52.45 ± 12.22
p-value		0.706	0.558	0.158	0.603	0.822
* Mann Whitney U Test, ** Kruskal Wallis 'H' Test, *** $p < 0.05$ is considered to be statistically significant.						

Table 5: Co-relation between clinical characteristics and quality of life.

couples, hence affecting their quality of life in compare to healthy couples [16]. As expected, unmarried subjects score higher in physical, psychological and environmental domains since they are totally dependent on contributions of their families.

Regardless of enormous advance in treatment modalities, the disability symptoms, various treatment, various food fluid restrictions to social life, stigma and taboos (social isolation) attached to CKD have shown to pose a significant bearing on the quality of life. A higher school education is known to play an essential role in the better understanding of the disease and awareness regarding their treatment options and coping ability with chronic disease. Graduated subjects participated in our study show better QOL than primary educated subjects which imply a positive relationship between the level of education and the QOL. Patti et al. states that with improvement in education, job opportunities are more which improves financial status and hence QOL in HD patients [17].

Economic status revealed slight variation in QOL between high and low-middle class patients, opposing research done by Ayub and Zahid [18]. Our study results are consistent with findings of other studies that reported a positive association between family income and QOL scores [19]. The role of higher income is reflected in the higher scores in all domains of QOL except psychological domain. The higher income of an individual improves the ability of the patient to afford the required treatment and ensures a better QOL.

Employment has been found to be an essential factor improving the QOL of ESRD patients. It was assumed that dialysis would result in patients returning to full active and productive lives. Although, according to Juergensen et al. there was no difference in QOL of the employed and unemployed haemodialysis patients [20]. We were amazed that retired subjects show the highest QOL comparing to unemployed and employed. This could be attributed to the fact that retired population is feeling more secure in all aspects of their lives than employed and unemployed population. Almost one-quarter of the

sample are housewives (unemployed) who are responsible for family individuals which constituted additional load besides their illness. Similar to study done by Garni [21].

Considering domicile, our findings suggest the lower QOL in rural areas. Few possibilities could be; the burden of distance travelling from their residential area to the dialysis centres in the city, transportation times/modes and sometimes the need for a companion can act as negative factors in the perceived QOL [22].

On the other hand, better QOL observed in patients who live in the metropolitan area owing to the improvement in living and facilities are more as compared to rural areas [23]. However, limited studies have been done to evaluate the relation of the QOL and rurality.

The majority of patients started dialysis having at least three or four comorbid conditions besides ESRD. Patient with comorbidities like HTN-DM have poor physical, social, environment scores as compared to the other comorbidities. Our findings are similar to other studies that observed a negative relationship between comorbidities and the QOL [19,24]. As for the clinical factors, presence of more comorbidities results in multiplying the number of medications that adversely affect QOL. However, in our study, patients taking more than 5 pills/day show better score in physical, social and environmental domains, which could be due to the fact that the appropriate prescribing medications can improve the QOL [25].

With the number of comorbidities, haemoglobin levels (severe anemia-erythropoietin hormone act as a precursor of RBCs), serum urea, serum creatinine and ions concentration are frequently monitored. Fluid restriction and maintenance of fluid level in haemodialysis patients is a critical task. A high dietary sodium intake or sodium loading during haemodialysis may result in post-dialysis thirst and consequent drinking and weight gain (IDWG). The high ultrafiltration volume is frequently difficult to remove, which leads to chronic fluid overload, congestive heart failure may ensue.

The standardized Kt/V is a method to measure the clearance efficiency of dialysis of various frequency, slow continuous renal replacement therapies, residual renal function and all the situations involving the use of clearance from various methods. With the optimum level remain to be established the dose of dialysis represented by Kt/V measurements <1.20 are widely considered inadequate. Below this level, each 0.10 decrease in Kt/v is estimated to increase the relative risk of death by 7%. The dialysis adequacy in our research was found to be 1.52.

Duration of dialysis plays an important role in determining QOL in dialysis patients. In our study, most of the patients were on dialysis for more than 24 months prior to recruiting for our research. According to Vasilieva, duration of dialysis is a significant predictor of low physical scores in haemodialysis [26] probably due to number of reasons such as undergoing the operation for inserting fistula, pain during insertion/uninstallation of dialysis tubes and other relative factors. This study is nearly similar to our investigation in which higher scores found in all domains except physical domain especially in patients coming for more than two years of HD. Patients with less than 100 dialysis sessions reported better QOL.

We observed no significant difference in QOL in thrice-weekly *vs.* twice-weekly HD patients resembling to study done by Saeed et al. [27] However patients undergoing thrice weekly HD seemed to have a slightly higher score in psychological, social and environmental domains.

Conclusion

Overall QOL in haemodialysis patient was found to be moderate. Marital and employment status have the negative impact while education, economic and residential have the positive impact on QOL. Interestingly, patients with social habits, increase in duration of haemodialysis, the frequency of haemodialysis and polypharmacy had a better quality of life. However, the number of reasons could account for the differences in these contradictory findings such as the sample size, lack of prospective and longitudinal studies with minimum biases along with nutritional status, the QOL instruments used, which may have been analogous but not similar. In addition, the QOL of the healthy general population itself may be low in developing countries compared to that of the healthy population in developed countries.

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