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Research Article

**A DESCRIPTIVE RESEARCH ON THE ASSOCIATION OF
DEMOGRAPHIC FEATURES WITH HEMODIALYSIS (HD)
PATIENT'S QUALITY OF LIFE (QOL)**¹Dr. Komal Rubab, ¹Dr. Muhammad Naseer ud Din, ²Dr. saira Kalsum¹THQ Kallur Kot²DHQ Bhakkar**Abstract:**

Objective: To explore the demographic features responsible for the Quality of Life of the patients undergoing Hemodialysis.

Methods: Our descriptive report was accomplished at Allied Hospital, Faisalabad (March 2016 to August 2016). The patients of ESRD on dialysis for three or more than three months were included in this research. ESRD patients and acute renal failure cases not on dialysis were dropped from the study. The sample consisted of 125 HD patients selected on the basis of inclusion criteria. Anthropological features including gender, age, geographic location, financial status, awareness and education, transportation facilities for dialysis, duration of HD were measured by investigators. Quality of Life index (26 aspects) was calculated in the light of WHOQoL BREF.

Results: The sample included 36 (28.8%) women and 89 (71.2%) men. It was noted that the score for environmental factors was the highest than all other aspects for patients under HD. Age, spousal status and duration of dialysis were significantly associated with HD patients. Males were better than females in social QoL. Age was inversely related with mental and physical aspects. Single and literate members were seen with better QoL as compared with married and illiterate patients ($p < 0.05$). Similarly, QoL for job holder patients was better than jobless patients ($p < 0.05$). Residents of countryside have improved QoL in environmental and health aspects. Economic position of dialysis subjects was studied in communal QoL. Transportation for reaching the HD facility was covered under psychological head and found significant ($p < 0.05$).

Conclusion: Different variable demographic factors like sex, age, status (married / single), employment status, location, financial status, and distance to HD facility, transportation issues and dialysis duration were directly or indirectly connected to the QoL of HD affected patients. The awareness and education has relatively positive effect on QoL among patients of Hemodialysis.

Key Words: End Stage Renal Disease (ESRD), Hemodialysis (HD), Quality of Life (QoL), WHO (QoL), Demographic, BREF and Anthropology.

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INTRODUCTION:

QoL (Quality of Life) is an individual's thinking about the way of achieving the set goals and objectives by utilizing the possible facilities available to the individual according to his struggle for the better position in life [1]. It has been revealed by different studies that QoL in HD patients (especially in ESRD patients) is quite lower than the QoL of general public [3]. A list of factors has been verified by multiple studies that effect the QoL of HD victims. These include RBC, social and economic status, education, type and duration of dialysis, transport issues, associated diseases, dejection [4] and unproductive kidney transplant [5]. In Pakistan, QoL of HD patients is effected by a number of things which include delayed diagnosis due to late referral to nephrologist [7], poor hemodialysis [8], Dejection [9], lack of blood [10] and starvation. The situation becomes worse when we come to know that only 80 nephrologists have to handle 163 million people [11]. Among 163 million, only 40 % are capable of getting a dialysis treatment [12]. Moreover, the renal centers' staff is not skilled enough to perform the dialysis or transplant in a professional manner. The purpose of this set up was to analyze these demographic factors which effect the QoL of HD patients suffering from ESRD.

METHODS:

Our descriptive report was accomplished at Allied Hospital, Faisalabad (March 2016 to August 2016). The subjects with 3 or lower months' dialysis history and other kidney diseases were dropped from the study. Demographic features for each subject were collected and summed up on a pre-designed questionnaire. Based on 26 questions, the QoL index was prepared by following the guidelines of WHOQoL BREF. The BREF was translated into Urdu for the understanding of local HD patients [13].

First question was about the QoL in patients' viewpoint. Second was related to the general perception of patient about health. Rest of the

questions were subdivided into 4 main domains (Mental/Psychological health, Physical health, social domain and environmental domain). The attributes were given a raw score range according to WHOQoL BREF from 4 - 20. The higher the score, higher is the QoL. The 4 main areas were called dependent variables and remaining factors were considered independent variables.

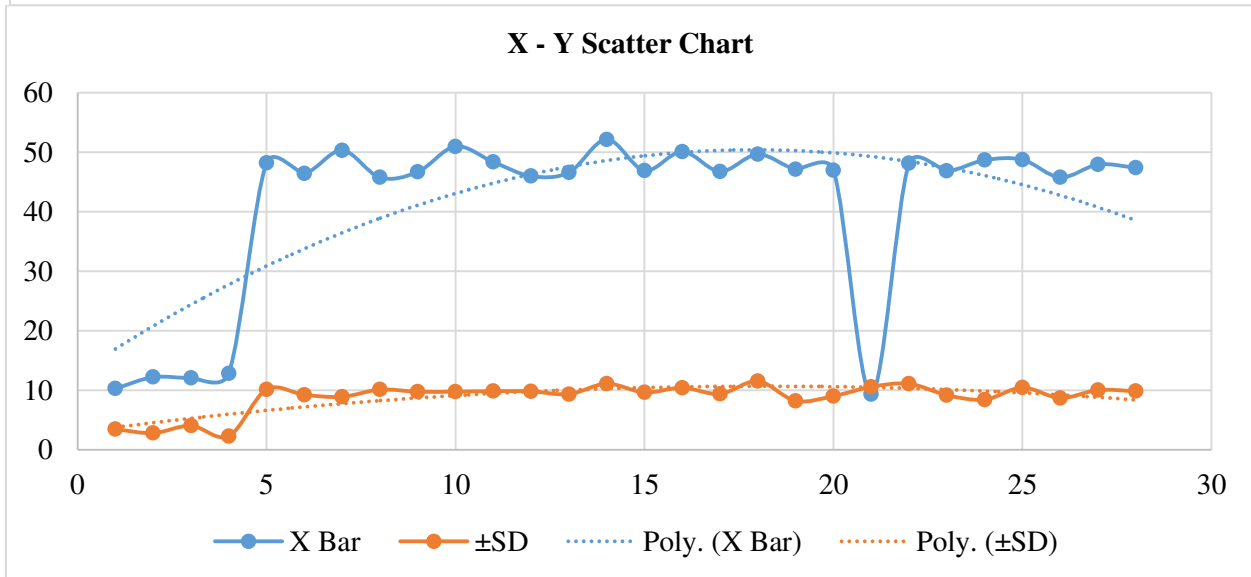
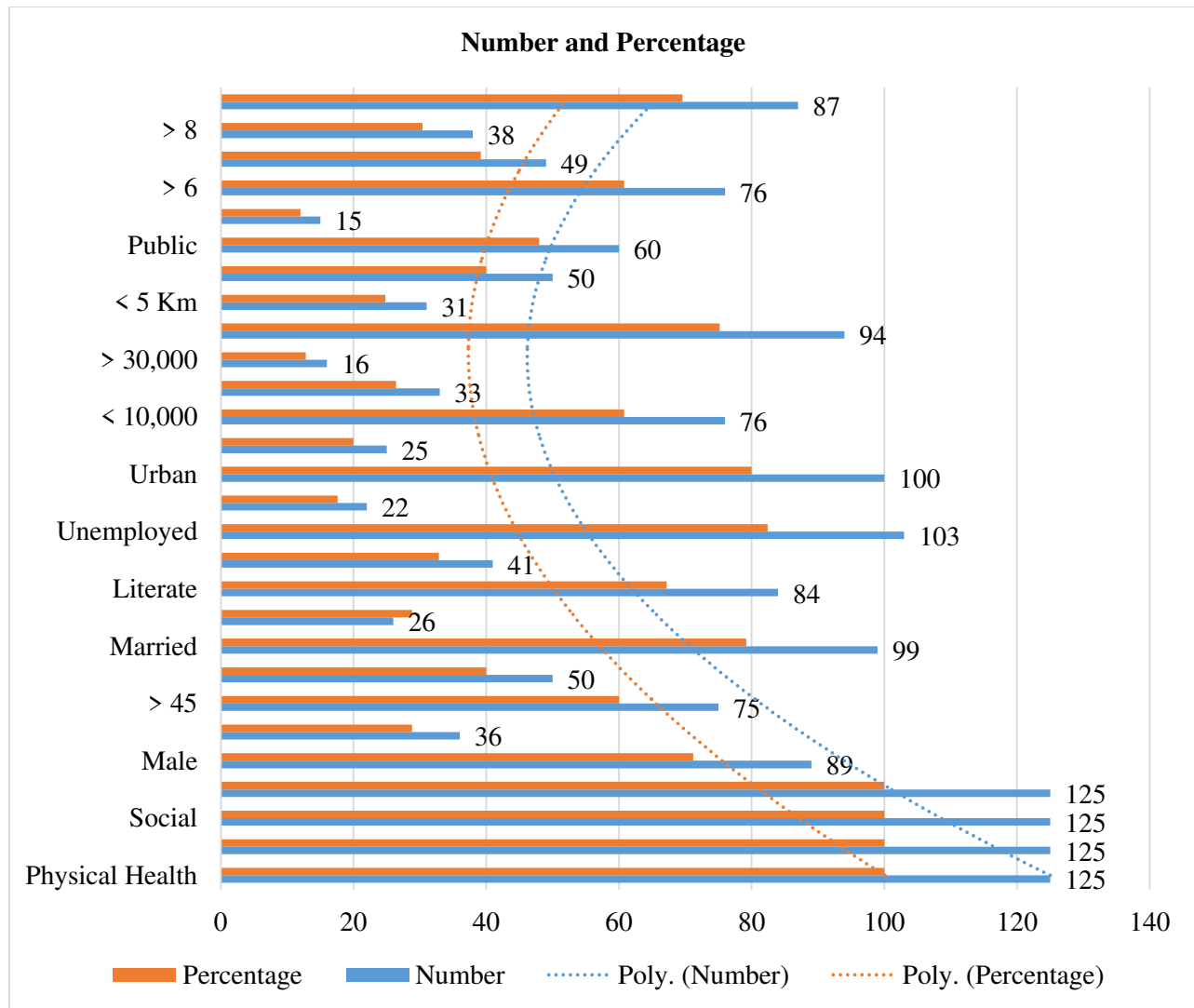
The data was analyzed through SPSS software. Qualitative and quantitative factors were treated according to statistical rules (percentages, means and standard deviation). The association between QoL and anthropological factors was calculated by Pearson correlation coefficient. Multiple Linear Regression model and backward elimination method was used for association of different domains with the QoL. The mean value for each domain of QoL was compared by using the analysis of variance (ANOVA) technique. The results were considered significant at P-value (< 0.05).

RESULTS:

Complete research population was 125 patients. The sample was composed of males (89 patients, 71.2%) and females (36 patients, 28.8%). The results for QoL of HD victims for environmental domain were more significant as compared to any other domain ($p < 0.05$). The Quality of Life was not significant with respect to gender. Males were better off than females in social relationships. Age was inversely proportional to the mental and physical health of the HD patients' QoL. The QoL index showed better score for unmarried patients as compared to married patients and the results were statistically significant. Domain 1 showed better QoL for educated and literate people but was not significant in overall analysis. The patients who were employed showed better QoL in two domains. Similarly, effects of different variables (location, duration, mode of travel, economic issues and family size etc.) on patients' QoL were studied and evaluated by the investigators.

Table: Demographic data of HD patients

Variables		Number	Percentage	X Bar	±SD	Statistics	P-value
Domain	Physical Health	125	100	10.3	3.48	F=14.32	0.001
	Psychological	125	100	12.22	2.83		
	Social	125	100	12.1	4.06		
	Environment	125	100	12.86	2.33		
Gender	Male	89	71.2	48.2	10.15	t=0.807	0.421
	Female	36	28.8	46.44	9.25		
Age (Years)	> 45	75	60	50.3	8.92	t=2.6454	0.011
	< 45	50	40	45.75	10.13		
Marital Status	Married	99	79.2	46.68	9.77	t=1.988	0.049
	Unmarried	26	28.8	50.96	9.784		
Education	Literate	84	67.2	48.35	9.87	t=1.261	0.21
	Illiterate	41	32.85	45.98	9.84		
Employment	Unemployed	103	82.4	46.59	9.37	t=2.43	0.016
	Employed	22	17.6	52.14	11.12		
Place of Residence	Urban	100	80	46.92	9.66	t=1.472	0.144
	Rural	25	20	50.1	10.43		
Monthly Income (Rs)	< 10,000	76	60.8	46.76	9.41	F=0.989	0.375
	10,000 to 30,000	33	26.4	49.64	11.55		
	> 30,000	16	12.8	47.12	8.24		
Distance covered to reach hospital (Km)	> 5 Km	94	75.2	46.98	9.03	t=1.2130	0.248
	< 5 Km	31	24.8	9.35	10.588		
Mode of Transport	Private	50	40	48.12	11.12	F=0.332	0.718
	Public	60	48	46.83	9.2		
	Others	15	12	48.66	8.45		
Total Time consumed in getting HD (Hours)	> 6	76	60.8	48.74	10.463	t=1.657	0.1
	< 6	49	39.2	45.76	8.721		
Family Members	> 8	38	30.4	47.92	10.05	t=0.263	0.793
	< 8	87	69.6	47.41	9.87		



DISCUSSION:

ESRD is a chronic disease which surely effects the patients' QoL. Most of the patients who spent poor HR QoL (Health Related Quality of Life) generally tend to quit hemodialysis [14]. The QoL was sub divided into 4 categories with the maximum score in environmental domain and the minimum in physical domain. Comparable results were produced by Salim K [15]. Factors responsible for poor QoL score in physical health domain were irregular sleep patterns, financial assistance for medical treatment, frequency of dialysis, depression and immobility. In addition, HD patients' QoL is also affected by dietary routines, changes in physical appearance and dependence on medical equipment which adds up to the anxiety of the HD patients and deteriorate the QoL.

The gender difference is also a contributing factor in QoL of HD patients and in common people [15, 16]. Males are better off than females in this regard. Our study documented that males are strong in making social relations and have better chances of making strong relations than females. Some studies conducted by Santos PR [16] and Salim K have yielded the similar results in social domain. QoL is also effected by age in Hemodialysis patients [17]. A study by Liu WJ et al [18] showed age of 40 years or more as a risk factor for Quality of Life in HD victims. In our set up, age was inversely related with physical and mental health of HD patients. The results are contrary to a study carried out by Khaled Abdel-Kader [19]. Some studies support the findings of our study in HRQoL namely HD (HEMO) studied at Northern Thames [20]. The marital and employment status also seem to affect QoL. Married patients need to take care and feed their families and are more stressed than single patients which effect their QoL. Similarly, unemployment increases stress and decreases the Quality of Life in HD affected cases.

Education effect on QoL was not significant but positive relationship was observed in physical domain of health [21]. The literate participants have improved awareness of the disease and the process of the treatment. Hence, they feel relax and have improved sleeping and eating habits which reduces the anxiety and improves the QoL. The number opportunity is directly related to the qualification. The employed patients were more satisfied and were enjoying better QoL as compared to unemployed patients. Patti F et al [22] have produced the similar results. Furthermore, employment, in some way or other, was closely related to the rest of the three domains discussed under WHOQoL BREF. A study

led by Sathvik BS [23], showed the similar results for employment in relation to QoL. The studies from Taiwan [24] and Brazil [25] have shown that the QoL in HD patients is superior in physical and mental prospective as seen in our setup.

Financial issues are also strongly related to the QoL in hemodialysis patients. A study by Nadia & Zahid delivered that the income is directly associated with the satisfaction of the patients and improves QoL [26]. The better income people have a positive edge over low income patients in connection to the dialysis expenses, mode of travel in case of emergency, better environment and caring, social activities and recreational facilities. All these factors help to reduce the stress and make their QoL score better. Our findings were supported by another study by Seica A [27]. He delivered that poor socioeconomic status negatively affects QoL of HD patients. Location was not significantly associated with the QoL in overall analysis (domain-wise) QoL of rural residents was better than patients residing in cities.

The findings of our study in connection to social relationships were comparable to another study by Moist LM [28]. The patients with better relations were able to manage timely transport for reaching HD center in time. Now, the dialysis facilities are being provided at the nearest hospitals in Pakistan.

The means of transport is also related to the QoL of the HD patients. The patients with own transport can move freely independent of time factor, safety while travelling and better protection from environmental pollution. Moreover, distance to the HD center also effect the QoL. The patients coming from far flung areas are in a hurry to get the dialysis facility in time. They often reach late and stuck into documentation formalities. Such patients are psychologically depressed as they have to travel a lot to get the dialysis treatment in time.

CONCLUSION:

Different variable demographic factors like sex, age, status (married / single), employment status, location, financial status, distance to HD facility, transportation issues and dialysis duration were directly or indirectly connected to the QoL of HD affected patients. The awareness and education has relatively positive effect on QoL among patients of Hemodialysis.

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