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Assessment of Health-Related Quality of Life among Hypertensive Patients of Loralai, Pakistan

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Abstract

Objective: This study was conducted to evaluate the health related quality of life of patients suffering from hypertension attending government hospital (DHQ) Loralai, Pakistan. **Methodology:** A cross-sectional descriptive study that was conducted from December 2015 to August 2016 in the Government District Hospital (DHQ) Loralai, Pakistan. Convenient sampling method was used to collect data. A self-administrative pre validated slandered questionnaire, EQ-5D, was distributed and collected after completion. The data was computed and analysed using IBM SPSS V. 22. Descriptive analysis and inferential statistics were applied. **Results:** Three hundred and thirty one patients participated in the study. The mean age was 47.10 (±15.29) years. Majority of patients, 55.6 % (n=184), were men. The mean (SD) of duration of high blood pressure was 2.45 (± 1.2) years. Most of the patients 54.7% (n=181) had no income. Most of the patients (46, 13.9%) showed no difficulties in the 1st, 2nd, 3rd and 4th domain whereas some problems in the 5th domain. Age group, marital status and occupation showed significant difference. **Conclusion:** The results of the study confirmed that Health related aspects of life are adversely altered in high blood pressure. Health-care authorities should provide adequate health facilities to the public and maintain check and balance on the delivery of health care services.

Key words: HRQoL, Hypertension, QOL, HRQoL in high blood pressure, EQ-5D, Cross-sectional study, Loralai, Pakistan.

INTRODUCTION

Hypertension contributes to a tremendous economic and public health impact leading to disability, health-care costs and mortality.[1] Hypertension [HT, HTN], also called high blood pressure is defined as "it is a long term medical condition in which the blood pressure in the major systemic arteries is persistently elevated.[2] It is noted that the management and control of hypertension reduce morbidity and mortality, the percentage fluctuates between 5.4 and 58 % of patients with controlled hypertension, worldwide.[3] The uncontrolled hypertension may be related to worsened quality of life.[4] The relationships between patient, disease, treatment variables and HRQoL have been reported.[5] Lower HRQoL in patients with hypertension compared with normotensive individuals has been reported recent systematic review and meta-analysis of observational studies of health-related quality of life (HRQoL) in hypertensive patients.[3] This conceptual model suggests that physiological changes due to illness or treatment can lead to symptoms which affect functional status or HRQoL. These relationships are influenced by disease-related patient characteristics and environmental variables that may affect patient perception of symptoms and changes in HRQoL.[6] An improved understanding of the determinants associated with HRQoL becomes an important factor in management strategies for hypertension.[3] This will help in predicting different dimensions within the hypertensive patient's life and help health care professionals to understand patient perceptions of their illness. Therefore, the present study aims to assess the HRQoL among hypertensive patients in Loralai, Pakistan.

MATERIALS AND METHODS

Study design

The following study was a cross sectional prospective study.

Settings

The study was conducted at Government District Hospital (DHQ) Loralai, Pakistan.

Study duration

The duration of study was 9 months. The study was conducted from December 2015 to August 2016.

Study tool

A standardized questionnaire, EQ-5D was used to assess the health-related quality of life in hypertensive patients. It is a standard tool to assess the different aspects/dimensions of quality of life and it is used to investigate the quality of life of patients in perception of their health. This instrument contains domains such as movement, taking self-care, daily activities, ache and dejection. Similarly it also contains respondent's self-imagined Visual Analogue Scale (VAS).

Sample size

The sample size consisted of a total of 331 hypertensive patients who were surveyed for HRQoL.

Ethical considerations

All the ethical considerations were followed during the study such as approval from the concerned medical superintendent of the hospital and consent form indicating the aims and objectives of the study was signed by each participant.

Analysis of data

All the data was analyzed using SPSS V. 20. Descriptive analysis was used for the demographic and disease characteristics of the patients. To determine the significance among demographic characteristics and disease condition Mann-Whitney and Kruskal-Wallis tests were used. Value such as ≤ 0.05 was considered as significant. EQ-5D domain score was calculated using UK values.

Table 1: Demographic characteristics (n=331).

Age group (years)	Frequency	Percent
18-27	37	10.6
28-37	61	18.4
38-47	76	23
48-57	66	19.9
58-67	60	18.1
68-77	23	6.9
78-87	8	2.4
88-97	2	0.6
Gender		
Male	184	55.6
Female	147	44.4
Marital status		
Married	285	86.1
Unmarried	46	13.9
Ethnicity		
Pashtun	232	70.1
Baloch	61	18.4
Panjabi	26	7.9
Sindhi	10	3
Other	2	0.6
Education		
Uneducated	39	11.8
Only religious education	68	20.5
Primary education	51	15.4
Intermediate	67	20.2
Graduation	92	27.8
Post-graduation	14	4.2
Occupation		
Jobless	105	31.7
Housewife	57	17.2
Student	22	6.6
Government official	50	15.1
Private job	57	17.2
Own business	40	12.1
Income		
5000-10000	28	8.5
10001-20000	60	18.1
20001-30000	35	10.6
More than 30000	27	8.2
No income	181	54.7
Disease duration (years)		
< 1	81	24.5
1-3	96	29
3-5	79	23.9
> 5	75	22.7
Taking medicine on time		
Yes	217	65.6
No	86	26
Don't know	28	8.5
Number of medicines		
One	82	24.8
Two	127	38.4
Three	68	20.5
Four	39	11.8
More than four	15	4.5

RESULTS

The demographics of the patients are shown in the Table 1 which include the frequency and percentage of different demographic characteristics and of disease related data. The average (SD) of the patient was 47.10 (±15.29) years, with 55.6 % (n=184) men. The mean (SD) of duration of high blood pressure was 2.45 ± 1.2 years. In the education domain 27.8% (n= 92) of the patients were graduated with 37.1% (n=105) of the respondents were jobless. Most of the patients 54.7% (n=181) had no income while 18.1% (n=61) of patients had monthly income between 10000-20000 Pakistani rupees. Majority of the patients (38.4%, n=127) were taking two drugs while 4.5% (n= 15) were taking more than four drugs.

According to the Table of EQ-5D dimensions, 57.7 % (n=191) patients showed no problems in mobility, 39.3 % (n=130) showed some problems in mobility while 3% (n=3) showed that they are confined to bed. In the domain of self-care 79.5% (n=263) showed no problems of taking care of themselves. Sixty one respondents (18.4 %) showed that they have some problems with taking care of themselves and 1.8% (n=6) showed that they were unable to bath. Majority of the patients (47.7%, n= 158) had no problems with usual activities, followed by 46.2% (n=153) who had some problems in usual activities while rest 6% (n=20) of patients said that they are unable to perform usual activities. Most of the patients (51.4%, n=170) reported to have moderate ache whereas 38.4% had ache. In the anxiety/depression dimension, 56.2% (n=186) patients showed moderate anxiety/depression, 31.7% (n=105) showed extreme anxiety/depression while 12.1% (n=40) showed no anxiety/depression.

Table 2: EQ5D Health Dimensions.

	Frequency	Percentage
Mobility		
I have no problems in walking about	191	57.7
I have some problems in walking about	130	39.3
I am confined to bed	10	3
Self-Care		
I have no problems with self-care	263	79.5
I have some problems washing or dressing myself	61	18.4
I am unable to wash or dress myself	6	1.8
Usual activities		
I have no problems with performing my usual activities	158	47.7
I have some problems with performing my usual activities	153	46.2
I am unable to perform my usual activities	20	6
Pain/Discomfort		
I have no pain or discomfort	127	38.4
I have moderate pain or discomfort	170	51.4
I have extreme pain or discomfort	34	10.3
Anxiety/depression		
I am not anxious or depressed	40	12.1
I am moderately anxious or depressed	186	56.2
I am extremely anxious or depressed	105	31.7

Table 3: Comparison of mean TTO score.

Age group* (years)	Frequency	Mean	Standard Deviation	P-Value
18-27	37	.68477	.229389	
28-37	61	.60839	.282771	
38-47	76	.57997	.289707	**0.001**
48-57	66	.54471	.322156	
58-67	60	.47935	.343196	
68-77	23	.16209	.308174	
78-87	8	.14887	.359892	
88-97	2	-.41650	.251023	
Gender**				
Male	184	.53918	.336066	0.327
Female	147	.50848	.336402	
Marital status**				
Married	285	.50461	.342817	**0.001**
Unmarried	46	.65522	.257871	
Ethnicity*				
Pashtun	232	.51694	.346312	
Baloch	61	.55664	.319689	
Panjabi	26	.50981	.301723	0.440
Sindhi	10	.51540	.313443	
Other	2	.83100	.024042	
Education*				
Uneducated	39	.56090	.334438	
Only religious education	68	.53485	.345996	
Primary education	51	.39890	.385750	0.077
Intermediate	67	.59482	.279916	
Graduation	92	.52945	.321259	
Post-graduation	14	.48600	.369575	
Occupation*				
Jobless	105	.45694	.369893	
Housewife	57	.40589	.355029	
Student	22	.65450	.237916	**0.001**
Government official	50	.53324	.337907	
Private job	57	.61618	.258857	
Own business	40	.66642	.253308	
Income*				
No income	181	.47949	.345078	
5000-10000	28	.56171	.312281	
10001-20000	60	.60473	.273347	0.076
20001-30000	35	.59163	.271954	
More than 30000	27	.53511	.452561	
Disease duration* (Years)				
<1	81	.58680	.259340	
1-3	96	.50546	.356269	0.429
3-5	79	.51804	.369574	
>5	75	.49300	.343835	

Total 63 health states were reported. Most of the patients (46, 13.9%) showed no difficulties in the 1st, 2nd, 3rd and 4th domain whereas some problems in the 5th domain. Followed by (n=34, 10.3%) who showed no difficulties in 1st and 2nd dimension however some difficulties in 3rd, 4th and 5th dimension. (mobility 'first', own-care 'second', routine work 'third', ache 'fourth' and tension being 'fifth' dimension). One respondent was reported to have no issues in all dimensions.

Comparison of mean is calculated among TTO score and demographics. Age group, marital status and occupation are significantly different. Rests of demographic characteristics were statistically insignificant as described in Table 3.

As shown in Table 4 comparison of mean is calculated among VAS score and Demographics. Age groups, marital status, profession, earnings, are significantly different, while rest of the demographics has no expressing difference.

DISCUSSIONS

It is evident from the results of this study that Quality of Life is poor in hypertensive individuals. (TTO score=0.5255 ±0.3360, VAS score=0.5638 ±0.2204) when compared with the UK values. To be the best of my enlightenment, it is the first study in district Loralai (2nd largest district of Balochistan), Pakistan, assessing the HRQOL of life in hypertensive individuals. Studies have been done in other areas of the country as well as outside the country which also supports my claim. As already mentioned studies have done in other areas to investigate the HRQOL in patients of high blood pressure and they also support our claim that quality of life is adversely afflicted in hypertensive patients. According to a study "HRQOL in patients with pulmonary arterial hypertension" by Taichman *et al*. reported

Table 4: Comparison of mean VAS Score.

Age group* (Years)	Frequency	Mean	Standard Deviation	P-Value
18-27	37	.67737	.154032	**0.001**
28-37	61	.62787	.186051	
38-47	76	.60179	.205387	
48-57	66	.57442	.206632	
58-67	60	.52127	.207609	
68-77	23	.31452	.192955	
78-87	8	.30588	.220393	
88-97	2	.00850	.115258	
Gender**				
Male	184	.57541	.218495	0.285
Female	147	.54935	.222867	
Marital status**				
Married	285	.54825	.222810	**0.001**
Unmarried	46	.66041	.179279	
Ethnicity*				
Pashtun	232	.55796	.226410	0.508
Baloch	61	.58575	.213516	
Panjabi	26	.54912	.200247	
Sindhi	10	.56510	.194862	
Other	2	.76250	.027577	
Education*				
Uneducated	39	.58795	.208647	0.096
Only religious education	68	.56665	.235216	
Primary education	51	.48335	.246904	
Intermediate	67	.60770	.188708	
Graduation	92	.56640	.210807	
Post-graduation	14	.54943	.240851	
Occupation*				
Jobless	105	.51570	.239063	**0.001**
Housewife	57	.48300	.224678	
Student	22	.65659	.151088	
Government official	50	.56764	.221562	
Private job	57	.62256	.185539	
Own business	40	.66595	.163380	
Income*				
5000-10000	28	.59175	.204711	**0.034**
10001-20000	60	.61557	.188379	
20001-30000	35	.60431	.180263	
More than 30000	27	.60070	.284723	
No income	181	.52904	.224974	
Disease duration* (Years)				
< 1	81	.59796	.178034	0.381
1-3	96	.55073	.227409	
3-5	79	.56277	.246831	
> 5	75	.54488	.223757	

that quality of life is severely affected in patients suffering with pulmonary hypertension.[7] In another study to evaluate the health related aspects of life and diabetic patients reported comparably limited health related aspects of life, as compared to healthy individuals.[8]

Similar results were obtained when HRQoL was assessed in hypertensive sufferer.[9] Fahad Saleem *et al*. reported in a study that health related characteristics of life in hypertensive patients of Quetta, Pakistan are poor which also supports of my claim of study.[10]

The demographics such as age, marital status, occupation and income had significant relationship with disease condition. There are different results when this study was compared with the studies of same nature.

One study reported significant demographics as locality, education and occupation.[10] Whereas two another studies indicated significant demographics like education, income and age respectively.[11,12] Baune and Aljeesh *et al*. reported in a study that earnings and sex had significant relationship with HRQoL.[13] One study showed epoch, gender, knowledge, family, money, hiring and body weight had indicative relationship.[14]

CONCLUSION

The results of the study confirmed that Health related aspects of life are adversely altered in high blood pressure. It gives an insight of the life conditions of hypertensive patients. It is the first study conducted in this region. Results of this investigation can be very beneficial in health care management systems, especially in the early diagnosis and management of high blood pressure. It has been shown that age, marital status, occupation and income had significant concussion on the life conditions of hypertensive. One important aspect of this study is that income had a major relationship with quality of life, improving the financial state of the patient can improve health related quality of life. Health-care authorities should provide adequate health facilities to the public and maintain check and balance on the delivery of health care services. The doctors and pharmacist should focus on the domains of health that are mostly affected in hypertension. Patient counseling by pharmacist can be very beneficial in improving the over-all QOL of patients.

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CONFLICT OF INTEREST

Authors declare no conflict of interest.

ABBREVIATIONS USED

HRQoL: Health Related Quality of life; **HTN:** Hypertension; **QoL:** Quality of life; **VAS:** Visual Analogue Scale.

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