CODEN [USA]: IAJPBB ISSN: 2349-7750

INDO AMERICAN JOURNAL OF
PHARMACEUTICAL SCIENCES

http://doi.org/10.5281/zenodo.1095555

Available online at: http://www.iajps.com Research Article

THE ASSESSMENT OF HEALTH RELATED QUALITY OF LIFE AMONG CHRONIC OBSTRUCTIVE PULMONARY DISEASE (COPD) PATIENTS IN QUETTA, PAKISTAN.

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Abstract:

Background: Chronic Obstructive pulmonary disease is one of the major public health threats. COPD severely affect the health related quality of life of patients suffering from it.

Aims and objective: The present study aims to assess the health related quality of life of COPD patients in Quetta Pakistan.

Methodology: A questionnaire based cross sectional study was conducted in different hospitals of Quetta city from April to August 2016. Convenient sampling method was used to collect data. A self-administrative pre validated slandered questionnaire, SGRQ, was distributed among patients and collected after completion. The data was computed and analysed using IBM SPSS V. 22. Descriptive analysis and inferential statistics were applied.

Results: A total of 253 patients participated in study. Among these, 156 (61.7%) were males and 224 (96.4%) were married. One hundred and twenty four (49.0%) patients were suffering this disease from 1 to 5 years. The mean duration of chronic obstructive pulmonary disease (COPD) was 8.5 years. Smoking status, co-morbidities and span of illness were found to have a statistically significant relationship with health related quality of life scores.

Conclusion: The finding of the present study revealed that chronic obstructive pulmonary disease (COPD) patients in Quetta City, Balochistan had a low health related quality of life (HRQoL).

Keywords: *COPD, HRQOL, Pakistan*

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Please cite this article in press as Zahir Jamali et al., ***The Assessment of Health Related Quality Of Life among Chronic Obstructive Pulmonary Disease (COPD) Patients By Using St.George's Respiratory Questionnaire (SGRQ) In Quetta Pakistan****, Indo Am. J. P. Sci, 2017; 4(12).*

INTRODUCTION:

Chronic Obstructive pulmonary disease is one of the major public health threats. COPD is currently the fourth leading cause of death in the world but is projected to be the 3rd leading cause of death by 2020. More than 3 million people died of COPD in 2012 accounting for 6% of all deaths globally [1]. COPD is a non-curable disease, which progressively reduces breathing capacity and impairs patients' ability to carry out activities of daily living, thereby adversely affecting health-related quality of life (HRQOL) [2].

Quality of life (QOL) is an important aspect for measuring the impact of chronic diseases. HRQOL measurement facilitates the evaluation of efficacy of medical interventions and also the detection of groups at risk of psychological or behavioral problems. Many studies have been conducted across the world to study the HRQOL of COPD patients and the factors affecting it using both generic and disease-specific questionnaires [3-7]. However, studies from India and other developing nations are less in number. The aim of our study was to evaluate the health related quality of life (HRQoL) among the chronic obstructive pulmonary disease (COPD) patients in Quetta. Pakistan,

METHODOLOGY

Study Design

A cross sectional, questionnaire based design was used to conduct the study.

Study Settings

The study was conducted in two Government hospitals, Bolan Medical Complex and Sandman Provincial hospital of Quetta city.

Study Tool

The St George's Respiratory Questionnaire (SGRQ) which was first developed by Jones PW in the UK. The questionnaire was originally in English language therefore it was translated into Urdu language (National language of Pakistan) by forward-backward-forward method of translation. The St George's Respiratory Questionnaire (SGRQ) consists of 50 items with 76 weighted responses that cover three parts symptoms, activity, and impact. Three subscales comprise of various items like symptoms (8 items), activity (16 items), and impacts having (26 items) [8].

Study Duration:

The time period in which this study has been conducted was from April to August 2016.

Sampling Procedure

Samples were derived from every hospital as discussed earlier, and the collection of sample was done by convenient sampling. The respondents were asked to fill the questionnaire and return of same time.

Inclusion Criteria

All the patients of COPD admitted in any hospital admitted mentioned above.

Exclusion criteria

Those who do not know Urdu or not agree to participate, Pregnant females, Refugees from other countries and Psychological patients were excluded from current research.

Ethical Approval

The study has been approved by the ethical committee of Faculty of pharmacy and Health Sciences, University of Baluchistan Quetta as per guideline of National bioethical committee of Pakistan [9]. All the participants were informed by the consent form that their participation is voluntary. Approvals from Hospitals were also taken prior to sample collection.

Statistical Analysis

All analyses were done by using SPSS V20. The descriptive statistics were done for the demographic details. Continuous data was expressed as mean and standard deviation while categorical data was expressed as frequency and percentage. Inferential statistical tests were used to evaluate the association or difference between variables.

RESULTS:

In total 253 with chronic obstructive pulmonary disease (COPD) patients were included in study. One hundred and fifty six participants 156(61.7%) were males and 224 (96.4%) were married out of 253 patients. The mean age of the patients was 59.0 years, 151(59.7%) were from urban area 194 (76.7%) were uneducated. Majority of patients 103 (40.7%) were unemployed. Demographic characteristics are summarized in Table 1.

Table 1: Demographic Characteristics Of Study Respondents.

CHARACTERISTICS	FREQUENCY n=253	PERCENTAGE (%)
AGE		
40-49	55	(21.7)
50-59	63	(24.9)
60-69	71	(28.0)
≥70	64	(28.0)
GENDER		
Men	156	(61.7)
Woman	97	(38.3)
ETHNICITY		
Baloch	75	(29.6)
Pashtoon	122	(48.2)
Sindhi	31	(12.3)
Punjabi	08	(3.2)
Others	17	(6.7)
RELIGION		
Muslim	249	(98.4)
Non-muslim	04	(1.6)
MARITAL STATUS		
Married	244	(96.4)
Unmarried	09	(3.6)
EDUCATION		
Uneducated	194	(76.7)
Matric	29	(11.5)
Intermediate	10	(4.0)
Graduation	01	(.4)
Others	19	(7.5)
LOCALITY		
Urban	151	(59.7)
Rural	102	(40.3)
OCCUPATION		
Govt-employers	19	(7.5)
Pvt-employers	08	(3.2)
Personal business	33	(13.0)
Un employers	103	(40.7)
House wife	90	(35.6)
MONTHLY INCOME		
No income	193	(76.3)
Less than 10000	16	(6.3)
10000 to 20000	26	(10.3)
20000 to 30000	17	(6.7)
More than 30000	01	(0.4)

One hundred and twenty four (49.0%) patients were suffering this disease from 1 to 5 years. The mean duration of chronic obstructive pulmonary disease (COPD) was 8.5 years. One hundred and thirty five respondents (53.4%) were past smokers. The Disease characteristics are summarized in table 2.

Table 2: Disease characteristics of study respondents

CHARACTERISTICS	FREQUENCY	PERCENTAGE
DURATION OF ILLNESS		
1 to 5 years	124	(49.0)
6 to 10 years	87	(34.4)
More than 10 years	42	(16.6)
COMORBIDITIES		
Hypertension	51	(20.2)
Cardiovascular diseases	54	(21.3)
Diabetes	28	(11.1)
Other	29	(11.5)
No Comorbidity	91	(36.0)
SMOKING		
Past smoker	135	(53.4)
Current smoker	35	(13.8)
Never	83	(32.8)
MEDICATIONS		
Yes	238	(94.1)
No	15	(5.9)
BRONCHODILATORS		
Yes	201	(79.4)
No	52	(20.6)
CORTICOSTEROIDS		
Yes	51	(20.2)
No	201	(79.4)
METHYLXANTHINES		
Yes	54	(21.3)
No	199	(78.7)
ANTIBIOTICS		
Yes	139	(54.9)
No	114	(45.1)

St, George's Respiratory Questionnaire (SGRQ) Scale Scores

The mean health related quality of life (HRQoL) scores for symptom 53.38±15.0, activity 69.24±16.2, impact domains were 63.74±15.1and the total St George's Respiratory Questionnaire (SGRQ) mean Score were 63.80±12.9respectively, which suggested marked impairments in health related quality of life (HRQoL) in all the quality of life domains. components of health related quality of life indicate severe impairment and a poor sense of well being. across all the findings, the score of all health related quality of life (HRQoL) domains was significantly higher with severe stages of chronic obstructive pulmonary disease (COPD). Distribution characteristics of theSt George's Respiratory Questionnaire (SGRQ)scale scores are shown in Table 3.

Table 3: Mean and standard deviation of health related quality of life in COPD patients according to St George's Respiratory Questionnaire (SGRQ) scale scores.

STATISTICS	SYMPTOMS SCORE	ACTIVITY SCORE	IMPACT SCORE	TOTAL SCORE
Mean	53.3	69.24	63.74	63.8
Std. Deviation	15.0	16.2	15.1	12.9
Variance	226.306	263.237	228.455	166.905
Range	68	80	70	66
Minimum score	18	20	24	27
Maximum score	86	100	94	93
Sum	13505	17517	16127	16141

Table 4: Association of HRQOL with categorical variables.

VARIABLES	SYMPTOMS SCORE	ACTIVITY SCORE	IMPACT SCORE	TOTAL SCORE
	Mean (p.value)	**Mean (p.value)**	**Mean (p.value)**	**Mean (p.value)**
SEX				
Men	53.35 (0.862)	70.03 (0.159)	63.47 (0.866)	63.84 (0.537)
Women	53.42	67.97	64.18	63.73
LOCALITY				
Rueal	52.45 (0.631)	69.25 (0.959)	64.12 (0.729)	63.66 (0.686)
Urban	54.08	69.23	63.49	63.89
EDUCATION				
Uneducated	54.41 (0.191)	69.25 (0.458)	65.39 (0.010)	64.79 (0.048)
Matric	52.28	72.66	57.81	62.03
Intermediate	46.10	65.90	54.35	56.53
Graduation	44.00	67.00	53.00	56.00
Others	48.87	65.79	61.47	60.68
SMOKING				
Past smoker	55.28 (0.000)	72.05 (0.002)	67.15 (0.000)	66.65 (0.000)
Current smoker	42.78	64.22	54.46	55.90
Never	54.75	66.77	62.11	62.48
DURATION OF ILLNESS				
1 to 5 years				
6 to 10 years	49.44 (0.000)	68.15 (0.249)	61.56 (0.024)	61.79 (0.006)
More than 10 years	56.96	70.36	65.56	65.54
	57.58	70.12	66.40	66.12
COMORBIDITIES				
Hypertension	46.36 (0.000)	63.37 (0.063)	55.55 (0.000)	56.88 (0.000)
CVS	62.19	72.52	70.88	69.95
Diabetes	56.92	73.69	72.07	69.89
Other	59.61	71.58	69.30	68.17
No Comorbidity	49.00	68.46	59.76	60.75

Association of HRQOL with categorical variables

Smoking status, comorbidities and span of illness were found to have a statistically significant relationship with health related quality of life scores. Locality and gender did not affect the health related quality of life scores in a statistically significant manner though the education of the patients was indicated significant differences except activity and symptoms domain Table 4.

DISCUSSION:

The study showed a higher impairedhealth related quality of life (HRQoL) among chronic obstructive pulmonary disease (COPD) patients using a disease-specific questionnaire St George's Respiratory Questionnaire (SGRQ). Quality of life (Qol) was higher disabled across all domains however, activity domain was the most affected it implies a significant amount of disturbances in the patients daily physical activities. while symptoms and impact domain was the minimum affected. impact score demonstrates that there are expansive scope of unsettling influences in psycho-social capacity of the patients are broad range of disturbances in psycho-social function of the patients, Quality of life in the part of activity was higher than in the impact and symptoms parts. This could be due to the irreversibility of the disease and airflow limitation as the result of which the patient develops dyspnea and symptom score low this could be due to taking of regular medications,The quality of life in the part of impact is somewhat low as compare to activity.

This study highlights thatchronic obstructive pulmonary disease (COPD)patients in Pakistan suffer a little higher reductions in health related quality of life.These result agrees with the result of chronic obstructive pulmonary disease (COPD)patients from other countries, as reported previously [10-13].While The reported Health related quality of life (HRQoL) scores from this study showed higher impaired Health related quality of life (HRQoL) compared with some other studies conducted in india and other countries among chronic obstuctive pulmonary disease (COPD) patients [14, 15]This could be due to the fact that this study were conducted in a hospital-based setting on hospitallised(in patients) and some of them were out patients. The majority of hospitalised patients were in severe conditions as compared to home based studies. Since according to the patients point of view and thier own perceptions, they may be highly affected physically as well as

socialy in a hospital-based setting and facing psychologically disturbance. Therefore the Healthrelated Qualitry of life (HRQoL) of these patients were extremly low. And we too percieved that health related quality of life (HRQol) of the hospitalised patients in Sandeman (provincial) hospital was poor as compared to Fatimah Jinnah (Chest hospital) Quetta Pakistan.Smoking is a known etiological agent for chronic obstuctive pulmonary disease (COPD) and increased exposure leads to severe stages of disease leading to poor health related quality of life (HRQoL).

This study demonstrated that the most significant variables that decide the well-being status in chronic obstructive pulmonary disease (COPD) patients are the co-morbid sickness, Smoking and education was also appeared to be significant differences which may affect on health related quality of life score significantly, similarly like this study In past reported studies, presence of co-morbid disease, less education, and smoking utilization brought about lower health related quality of life [16-18].

CONCLUSION:

The finding of the present study revealed that chronic obstructive pulmonary disease (COPD) patients in Quetta City, Balochistan had a low health related quality of life (HRQoL). Hence, Results of this study demonstrate that patients with chronic obstructive pulmonary disease (COPD) need better support and health education from health care providers. The results also indicate that health care providers must be more observant to the problems so the patients may improve in their health related quality of life (HRQoL).

REFERENCES:

1.Asia, P.C., Global Initiative for Chronic Obstructive Lung Disease strategy for the diagnosis, management and prevention of chronic obstructive pulmonary disease: an Asia-Pacific perspective. Respirology (Carlton, Vic.), 2005; **10**(1): p. 9.

2.Mannino, D.M. and A.S. Buist, Global burden of COPD: risk factors, prevalence, and future trends. The Lancet, 2007; **370**(9589): p. 765-773.

3.Jones, P. and P. Wijkstra, Quality of life in patients with chronic obstructive pulmonary disease. EUROPEAN RESPIRATORY MONOGRAPH, 2006. **38**: p. 375.

4.McSweeny, A.J., et al., Life quality of patients with chronic obstructive pulmonary disease. Archives of internal medicine, 1982; **142**(3): p. 473-478.

5.Jones, P.W., Activity limitation and quality of life in COPD. COPD: Journal of Chronic Obstructive Pulmonary Disease, 2007; **4**(3): p. 273-278.

6.Tsiligianni, I., et al., Factors that influence disease-specific quality of life or health status in patients with COPD: a systematic review and meta-analysis of Pearson correlations. Prim Care Respir J, 201;. **20**(3): p. 257-268.

7.Altenburg, W.A., et al., Functional and psychological variables both affect daily physical activity in COPD: a structural equations model. Respiratory medicine, 201;. **107**(11): p. 1740-1747.

8.Meguro, M., et al., Development and validation of an improved, COPD-specific version of the St. George Respiratory Questionnaire. CHEST Journal, 2007; **132**(2): p. 456-463.

9.N.B.C, P. Ethical Research Committee-Guidelines. 2016 [cited 2015; Available from: http://www.pmrc.org.pk/erc_guidelines.htm.

10.Nonato, N.L., et al., Behavior of quality of life (SGRQ) in COPD patients according to BODE scores. Archivos de Bronconeumología (English Edition), 2015; **51**(7): p. 315-321.

11.Halvani, A., N. Pourfarokh, and K. Nasiriani, Quality of life and related factors in patients with chronic obstructive pulmonary disease. 2006.

12.Corlateanu, A., et al., Predicting Health-Related Quality of Life in Patients with Chronic Obstructive Pulmonary Disease: The Impact of Age. Respiration, 2016; **92**(4): p. 229-234.

13.Okubadejo, A., P. Jones, and J. Wedzicha, Quality of life in patients with chronic obstructive pulmonary disease and severe hypoxaemia. Thorax, 1996; **51**(1): p. 44-47.

14.Shavro, S.A., et al., Correlation of health-related quality of life with other disease severity indices in Indian chronic obstructive pulmonary disease patients. International journal of chronic obstructive pulmonary disease, 2012; **7**: p. 291.

15.Miravitlles, M., et al., Exacerbations, hospital admissions and impaired health status in chronic obstructive pulmonary disease. Quality of Life Research, 2006; **15**(3): p. 471-480.

16.Ferrer, M., et al., Chronic obstructive pulmonary disease stage and health-related quality of life. Annals of internal Medicine, 199;. **127**(12): p. 1072-1079.

17.Wijnhoven, H.A., et al., Determinants of different dimensions of disease severity in asthma and COPD: pulmonary function and health-related quality of life. CHEST Journal, 200;. **119**(4): p. 1034-1042.

18.Stewart, A.L., et al., Functional status and well-being of patients with chronic conditions: results from the Medical Outcomes Study. Jama, 1989; **262**(7): p. 907-913.