



## A Cross-sectional Study Investigating the Impact of Asthma and Chronic Obstructive Pulmonary Disease on the Quality of Life of Rural Residents

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**Abstract:** *The goal of this study was to assess how the quality of life of rural Charsadda and surrounding areas people are impacted by asthma and chronic obstructive pulmonary disease (COPD). Data were gathered for this cross-sectional research, and descriptive statistics were used to analyze it. The data analysis revealed that the (Quality-of-Life) of 200 study participants was lower than that of the general population. Most asthma and COPD sufferers struggled to regulate their symptoms because they had limited healthcare access and a limited budget. These patients' average (Quality-of-Life) scores were (74.03) (SD = 16.3) and 73.3 (SD = 16.7), respectively, both lower than those of the general population. To properly treat COPD and asthma, rural Charsadda and its neighbouring regions need greater access to healthcare.*

**Key Words:** COPD, Asthma, Rural Areas, Quality-of-Life

### Introduction

Asthma and chronic obstructive pulmonary disease (COPD) are the two most common chronic respiratory illnesses in the world (Pawankar, Canonica, Holgate, & Lockey, 2012; To et al., 2012). Breathing issues, chest tightness, wheezing, and coughing are some of their symptoms. "While COPD, which causes shortness, excessive mucus production, and trouble breathing, is a severe respiratory ailment that advances gradually (Group, 1998). An inflammatory disorder of the airways called persists over time"(Organization, 2019). The quality of life for individuals afflicted has diminished as a consequence of the rising incidence of asthma and COPD in Pakistan's rural regions. These illnesses limit physical activity and adversely affect workers' skills,

which results in depressive and anxious sentiments. In rural locations, poor living circumstances, a lack of financial resources, a lack of access to healthcare, and high air pollution levels all contribute to the problem (Kim, 2020; Wing, 2018). To determine the degree of impact that asthma and COPD have on the quality of life, 200 patients from Charsadda's rural areas and neighbouring districts were assessed (Collaborators, 2017). A significant drawback for these people is the lack of access to necessary medical treatment and drugs to treat their symptoms. The methodology used in this research was the gathering of cross-sectional data, which was then subjected to descriptive analysis (Brunekreef & Holgate, 2002). The study's findings will provide insight into the manner of life for asthmatic and COPD patients. Comprehensive treatments may be offered

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by identifying prospective possibilities that might improve the quality of life for this demographic.

## Method

In rural Charsadda and neighbouring regions, 200 people with asthma and COPD participated in cross-sectional research. Data were collected using systematic questionnaires and then analyzed using descriptive statistics. The WHOQOL-BREF is a questionnaire developed by the World Health Organization to assess the quality of life. This specific questionnaire evaluated four separate aspects of (Quality-of-Life): social connections, mental health, physical health, and environmental health. Along with these subjects, the questionnaire contains 10 questions that assess the patient's general health. Investigations are conducted with the utmost accuracy and attention to detail, with a well-thought-out strategy implemented. Throughout the process, study participants received extensive advice and support from highly competent scientific staff. The information has been carefully collected in the local language of the region and has been maintained in secrecy and safety.

## Data Collection

A survey of 200 people with COPD and asthma was done in rural Charsadda and neighbouring areas. Descriptive statistics and structured questionnaires were used to gather the data. The World Health Organization (Quality-of-Life) Questionnaire ["WHOQOL-BREF"] is a 24-question survey that evaluates four aspects of (Quality-of-Life): social connections, mental and physical health, environmental health, and physical health. Ten

questions on general health issues are on the test. Data is gathered by trained research assistants who direct participants and provide support as needed in order to guarantee accuracy. The study's primary objective was data collecting, which was done in native tongues to ensure anonymity.

## Statically Analysis

Due to restricted access to medical treatment and financial restraints, the majority of patients with asthma and COPD struggle to control their symptoms, according to a descriptive statistical analysis of the research. The mean (Quality-of-Life) ratings for patients with asthma and COPD were significantly lower than the average (74.03) ("SD = 16.3") and 73.03 ("SD = 16.07"), respectively.

## Results

Two hundred patients in the research had considerable physical activity restrictions compared to the general population, such as difficulties working in the field or at work. The (Quality-of-Life) is negatively impacted by the thrasher season, weather changes, particularly in the spring, and harsh winters. Household duties cannot be performed by women. Young ladies find it challenging to get married. The mean (Quality-of-Life) ratings for patients with asthma or COPD were significantly lower than those for the general population (74.03; SD=16.03) and (73.03; SD=16.07), respectively. According to the survey, the majority of asthma and COPD patients are unable to afford necessary healthcare treatments, which makes it challenging for them to effectively manage their symptoms.

**Table 1**

*Patients with COPD and Asthma received mean (Quality-of-Life) Scores*

Characteristic	Asthma Sufferers	COPD
Score. Mean wise	74.03	73.03
S.D	16.03	16.07

**Table 2**

*Patients with Asthma and COPD have Access to Medical Facilities*

Characteristic	Asthma Sufferers	COPD Patients
Availability of Medical Facilities	46%	46%
Financial constraints prevent them from managing their symptoms	54%	54%

**Table 3**

*Population Statistics*

Characteristic	Asthma Sufferers	COPD Patients
Availability of Medical Facilities	46%	46%
Financial constraints prevent them from managing their symptoms	54%	54%

**Table 4**

*Treatments to Improve COPD and Asthma Patients' (Quality-of-Life)*

Treatments	Summary
Availability	Making greater use of medical facilities, including general practitioners, specialists, and community health workers, is necessary to increase access to care and effective treatment for COPD and asthma sufferers in remote locations.
Support. Financial	Rural COPD and asthma patients may be eligible for financial aid to cover the cost of their medications and treatments.
Education	"Patients with COPD and asthma in rural regions may be eligible for financial assistance to cover the cost of their medications and medical care"
Enhanced air quality	"Taking action to lessen air pollution in rural regions can help to reduce the incidence and severity of asthma and chronic obstructive lung disease"

### Outcomes of the Study

1. Quality-of-life (QoL) evaluations were considerably worse among those with asthma and COPD compared to the general population.
2. The majority of individuals with asthma or COPD also suffered from limited access to medical care due to budgetary constraints and were unable to regulate their symptoms.
3. "Improving access to healthcare services, providing financial aid A few measures that might be adopted to enhance the (Quality-of-Life) of asthma and COPD patients in rural portions of Charsadda and adjacent districts include providing financial support for drugs and treatments, initiating education and awareness programs, and reducing air pollution in rural regions"

### Discussion

According to the study's summary, asthma and COPD afflict rural residents of Charsadda and the adjacent areas at higher rates than urban residents. The estimated mean (Quality-of-Life) of this group of patients was noticeably poorer than that of the overall population. People find limited access to healthcare facilities to be the main reason (Brunekreef & Holgate, 2002; Group, 1998). In addition, financial constraints are also a major obstacle to symptom control (Muhammad Ashraf Khan, 2022; Muhammad Amir Khan, Ahmed, Anil & Walley, 2015; Muhammad Amir Khan et al., 2019). According to the findings of

the present research, it is crucial to increase access to healthcare in rural Charsadda and the neighbouring regions. Patients may be able to get better care and effective symptom when "they have access to medical experts such primary care doctors, specialists, and community health workers for disease prevention and"management. Providing financial aid to reduce the cost of treatment has been shown to significantly improve patients' (Quality-of-Life) (Boulet et al., 2019). Health education and public awareness initiatives that enlighten people about asthma and COPD and urge them to adopt healthy lifestyle choices are essential to reducing the incidence and severity of these diseases. As a result, the province's rural areas need action to reduce air pollution (Rodriguez-Roisin et al., 2012).

### Conclusion

This research asked 200 asthma and COPD patients from rural Charsadda and neighbouring Pakistani counties about their quality of life. The study indicates that the surveyed population's (Quality-of-Life) is lower than that of the overall population. The mean (Quality-of-Life) ratings for individuals with COPD and asthma were also significantly lower than those for the general population. Asthma and COPD sufferers had mean scores of 73.03 (SD = 16.07) and 74.03 (SD = 16.03), respectively. Due to their inability to afford sufficient symptomatic treatment, these data also suggest that the majority of patients have limited access to medical services. The

researchers came to the conclusion that expanding access to healthcare services is crucial to ensuring that patients in rural Charsada and the surrounding areas get the finest care. Asthma and COPD patients in these places will probably see a significant decline in their (Quality-of-Life).

### Limitations

The study includes several restrictions. First, the findings could have been impacted by the limited sample size. Additionally, data were only gathered via cross-sectional questionnaires, which may have omitted crucial details about the participant's experiences. Finally, since the statistics are only

collected in a few places, it is still being determined if they adequately represent the whole population.

### Future Discovery

Insightful findings were obtained from research on the (Quality-of-Life) of asthma and COPD patients in rural Charsadda and neighbouring areas. Future studies should concentrate on identifying Therapies that can enhance their quality of life and evaluating the good effects of asthma and COPD. Additionally, more investigation is required on the (Quality-of-Life) of people in rural regions who suffer from asthma and COPD, accounting for the influence of healthcare facilities and cost constraints.

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