

ORIGINAL ARTICLE

Symptoms and Severity of Depression in Copd Patients

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ABSTRACT

Objective: The purpose of this research was to identify how often individuals with COPD suffer from depression and what variables may be contributing to their feelings of depression.**Study Design:** Cross-sectional study**Place and Duration:** This cross-sectional study was conducted at Department of Psychiatry, Lady Reading Hospital, Peshawar in the period from April, 2022 to September, 2022.**Methods:** Total 220 patients of both genders had age 20-85 years were included in this study. All the patients had chronic obstructive airway disease were presented. Patients' full demographic information, including age, sex, BMI, job status, and smoking history, was collected after obtaining informed written consent. Association of depression and its severity were recorded among all cases. We used SPSS 24.0 to analyze all data.**Results:** One hundred and forty (63.6%) cases were males and eighty (36.4%) were females. Patients mean age was 61.03 ±7.48 years and had mean BMI 25.6±7.26 kg/m². Majority 150 (68.2%) cases were unemployed. 135 (61.4%) cases were smokers. We found a high frequency of depression in 130 (59.1%) patients in which 60 cases were had severe depression. Older age, living alone and unemployment were the risk factors of depression among COPD patients.**Conclusion:** We concluded in this study that frequency of depression among COPD patients were high found in 59.1%. Depressive symptoms were shown to be associated with several different risk factors in COPD patients. Older COPD patients, men, those who are retired or jobless, and those who do not have a significant other are at a higher risk of depression.**Keywords:** COPD, Depression, Old age, Severity

INTRODUCTION

Dyspnea, coughing, and increased sputum production are only few of the long-term respiratory symptoms of chronic obstructive pulmonary disease (COPD). COPD is characterised by a gradual and irreversible lung obstruction, [1] as previously mentioned. [1,2] Chronic obstructive pulmonary disease (COPD) is a major public health problem globally, responsible for 5 percent of all fatalities. High smoking prevalence combined with ageing populations suggests that reported prevalence rates will continue to climb, with estimates ranging from 251-328 million instances globally. [4] This persistent illness has far-reaching consequences, impacting more than just health and well-being but also the economy. By 2030, COPD patients in England are predicted to have direct yearly expenses of \$2.32 billion (\$1.85–3.08 billion), up from \$1.50 billion (\$1.18–2.50 billion) in 2011.[5] Whereas 90% of COPD-related fatalities occur in poor and middle-income countries, the vast bulk of COPD literature is based on research conducted in high-income nations (LMICs). There is a lack of information on the incidence of COPD in Pakistan (p. 6), however 2.1% was found in a global epidemiological research published in 2012 among those older than 40. Both the aetiology and the epidemiology of this phenomenon may be affected by several factors, such as the high prevalence of exposure to toxic compounds in the workplace and environmental contamination.[6,7]

The major cause of COPD, smoking, has been linked to depression [8], and the two conditions typically exacerbate one other. Since depression is a factor in starting and keeping the habit of smoking, and since COPD is often the result of smoking, the three are inextricably linked. Further, a recent meta-analysis of longitudinal data by Atlantis et al. [9] demonstrates that the link between depression and COPD seems to go in both directions. This meta-analysis found that having COPD increases the risk of depression (1.69; 95% CI 1.45-1.96) and that having depression increased the chance of having bad outcomes and dying from COPD by 1.43 (95% CI 1.20-1.71).

However, it is well recognized that the reported prevalence of depression in COPD varies greatly, from 10 to 57%, with the greatest percentages recorded in patients with more severe COPD, especially in long-term oxygen users [10] or in patients

recuperating from a COPD exacerbation. This may be attributable, in part, to the diversity and complexity of both disorders [11]. Different variables, including as genetic susceptibility, exposure to losses and stressors, and direct damage to the brain mediated by the pathophysiological consequences of the chronic respiratory disease, all play a role in how depressive symptoms manifest in COPD patients [12].

Patients with COPD may benefit greatly from addressing health-related quality of life issues. They may be limited in what they can do, have trouble interacting with others, and find themselves less capable of taking care of themselves [13]. Comorbidities are common in people with COPD. Patients with chronic obstructive pulmonary disease (COPD) often experience anxiety and sadness, yet these conditions are often overlooked and untreated. In spite of the importance of identifying and treating these comorbidities for COPD patients, only a small number of prospective studies have explored these issues.[14]

Anxiety was found to have a "crude prevalence" of 22.7% and depression, 11.7%, in a research done in Nepal by Risal et al. Hospital Anxiety and Depression Scale (HADS) anxiety prevalence was 16.1% and depression prevalence was 4.2% after adjusting for age and gender. The healthcare system has failed to address the doubling of COPD-related deaths in the previous 30 years. Anxiety and depression are the most common mental comorbidities in this patient population [15], and they have been associated to increased mortality, impaired functional status, and reduced quality of life.

MATERIAL AND METHODS

This cross-sectional study was conducted at Department of Psychiatry, Lady Reading Hospital, Peshawar in the period from April, 2022 to September, 2022 and comprised of 220 patients of COPD. Patients' full demographic information, including age, sex, BMI, job status, and smoking history, was collected after obtaining informed written consent. Patients having a history of depression, those who had recently (within the past six months) lost a spouse, sibling, parent, or child, or those who were using oral steroids were not included.

The questionnaire consisted of two distinct sections. In the first portion, the demographic information of the participants was presented, and in the second section, a depression screening instrument known as the Hospital Anxiety and Depression Scale (HADS) was utilized. The HADS has a sensitivity of 70% while maintaining a specificity of 90%, making it an effective screening instrument. Each of the subscales is given a score that ranges between 0 and 21, inclusive. Patients diagnosed with COPD who scored an 8 or above on a scale measuring depression were considered to be depressed.

We did all of the data entry, coding, and analysis with SPSS 24. Utilizing cross tabulation and chi-square testing, we analyzed the demographic and clinical data collected at the start of the study. It was determined to be significant if the value was less than 0.05.

RESULTS

Among all, one hundred and forty (63.6%) cases were males and eighty (36.4%) were females. Patients mean age was 61.03 ±7.48 years and had mean BMI 25.6±7.26 kg/m². Majority 150 (68.2%) cases were unemployed. 135 (61.4%) cases were smokers.(table 1)

Table-1: Participants' Demographics details

Variable	Frequency	Percentage
Mean age (years)	61.03 ±7.48	
Mean BMI (kg/m ²)	25.6±7.26	
Gender		
Male	140	63.6
Female	80	36.4
Employment Status		
Yes	150	68.2
No	70	31.8
Smoking History		
Yes	135	61.4
No	85	38.6

Among all cases of COPD, 130 (59.1%) patients had depression and 90 (40.9%) cases were had no depression.(figure 1)

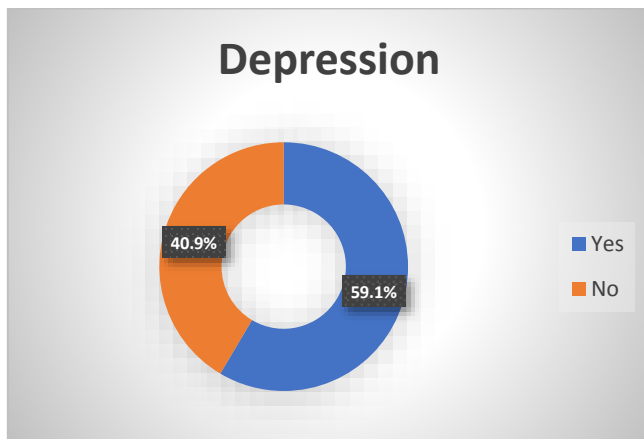


Figure-1: Association of depression among COPD cases

Among 130 cases of depression, 60 (46.2%) patients had severe, 40 (30.8%) cases had moderate and 30 (23.1%) cases had mild depression.(table 2)

Table-2: Severity of depression among all cases

Variable	Frequency (130)	Percentage
Types of Depression		
Mild	30	23.1
Moderate	40	30.8
Severe	60	46.2

WE found that older age, living alone and unemployment were the risk factors of depression among COPD patients.(figure 2)

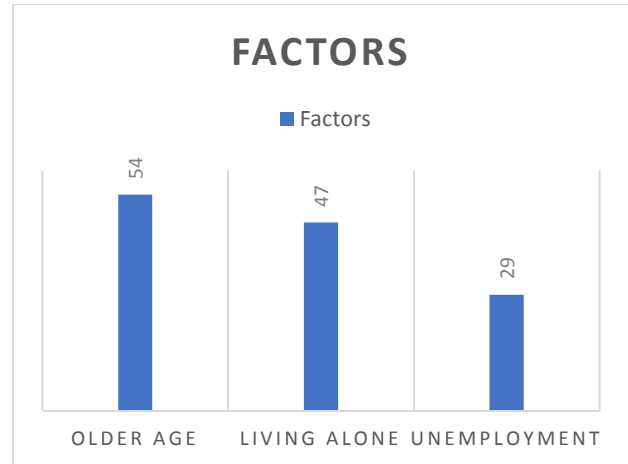


Figure-2: Risk factors of depression among COPD cases

DISCUSSION

Patients with COPD were found to have depression at a rate of 59.1% in this study. Patient depression due to COPD was observed at 15% and 72% in two Pakistani studies. The disparity between our results and those of other studies may be attributable to the smaller sample sizes of the former. In addition, those earlier research didn't use standardised screening procedures and didn't account for potential biases [16,17].

According to the results of a case-control research comparing Chinese patients with and without COPD, the prevalence of depression is 35.7% in patients with COPD and only 7.2% in patients without COPD. [18] Among those with COPD in India, 33.3% were diagnosed with moderate to severe depression, and 20.6% had major depressive disorder [19]. Depending on geographical location, research design, and screening methods, the incidence of depression in COPD patients varies.

In current study 220 patients were presented. One hundred and forty (63.6%) cases were males and eighty (36.4%) were females. Patients mean age was 61.03 ±7.48 years and had mean BMI 25.6±7.26 kg/m². Majority 150 (68.2%) cases were unemployed. 135 (61.4%) cases were smokers. These findings were comparable to the previous study.[20] WE found that older age, living alone and unemployment were the risk factors of depression among COPD patients. A patient's physical symptoms, such as breathing problems, may be a cause of anxiety and despair. [21] But it has also been documented that life events and other exogenous stresses are linked to depression and low quality of life in this group. [22] Nearly half of those with chronic obstructive pulmonary disease (COPD) in a new longitudinal research said they had encountered stressful situations that had a major influence on their lives.

Previous research has shown that people with COPD who use steroids for an extended period of time are more likely to experience depression than those who do not. [23] Steroid usage was similarly linked to increased risk of depression in COPD patients by Gift et al. [24]. So that COPD patients who also need steroid medication may be evaluated and managed appropriately, further research into this connection is necessary. While some research indicates that a person's gender plays little to no role in determining whether or not they will experience depression due to chronic obstructive pulmonary disease (COPD), other research indicates that women in particular are more likely to suffer from depression due to their condition [25,26]. As a counterpoint, our findings indicated that male patients were more prone to experience depression. Possible explanations for this discrepancy

include the fact that males in Pakistan are less likely to suffer from depression and that the stress and anxiety that come with having a chronic condition like COPD may be more pronounced in a country where men are often the primary breadwinner. In order to better understand why men with COPD are more likely to experience depression, further research is required.

CONCLUSION

We concluded in this study that frequency of depression among COPD patients were high found in 59.1%. Depressive symptoms were shown to be associated with several different risk factors in COPD patients. Older COPD patients, men, those who are retired or jobless, and those who do not have a significant other are at a higher risk of depression.

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