ISSN: 0975-3583, 0976-2833 VOL15, ISSUE 12, 2024

Psychiatric Comorbidities and Their Impact on Quality of Life in Patients with Respiratory Disorders

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ABSTRACT

Background: Respiratory disorders such as chronic obstructive pulmonary disease (COPD), asthma, and interstitial lung diseases are major contributors to global morbidity and mortality. Beyond their physical effects, these chronic conditions are often accompanied by significant psychiatric comorbidities, including anxiety and depression, which adversely affect patients' quality of life (QoL). Despite the recognized burden, the interplay between psychiatric conditions and QoL in individuals with respiratory disorders remains underexplored, particularly in rural populations. **Aim:** This study aims to assess the prevalence of psychiatric comorbidities, specifically anxiety and depression, in patients with respiratory disorders and evaluate their impact on QoL across various domains. **Methods:** A cross-sectional study was conducted among 78 patients with respiratory disorders attending a tertiary care center in Rajasthan. Patients aged 18 years and above, with stable respiratory conditions, were recruited using purposive sampling. Data were collected using a semi-structured proforma and standardized tools, including Beck's Anxiety Inventory, Beck's Depression Inventory, and the WHOQOL-BREF scale. Sociodemographic and clinical profiles were analyzed to identify factors influencing psychiatric comorbidities and QoL. Statistical analysis was performed under the supervision of a statistician. **Results:** The study revealed a high prevalence of psychiatric comorbidities, with 84.62% of patients experiencing anxiety and 71.79% experiencing depression. Among those with anxiety, 30.77% had mild symptoms, 28.21% moderate, and 25.64% severe symptoms. Depression was predominantly mild (46.15%) and moderate (20.51%). Quality of life assessment showed poor QoL in 25.64% of patients in the physical health domain, 23.08% in psychological health, and 17.95% in social relationships, while the environmental health domain showed no poor QoL. No patients reported very poor QoL across any domain. Sociodemographic analysis revealed that most patients were male (82.05%), aged 46–60 years (46.15%), from rural areas (100%), and belonged to lower socioeconomic status (79.49%). **Conclusion:** Psychiatric comorbidities are highly prevalent among patients with respiratory disorders and have a significant negative impact on QoL. The findings underscore the critical need for integrated mental health care in the management of chronic respiratory diseases, with targeted interventions to improve physical, psychological, and social well-being. Holistic, patient-centered approaches can help address the dual burden of respiratory and psychiatric conditions, thereby improving overall health outcomes.

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Keywords: Respiratory disorders, Depression, Anxiety, Beck's Anxiety Inventory, Beck's Depression Inventory, WHOQOL-BREF scale etc.

1. INTRODUCTION

Respiratory disorders, such as asthma, chronic obstructive pulmonary disease (COPD), and interstitial lung diseases, are major contributors to global morbidity and mortality. These chronic conditions impose both physical and psychosocial burdens, with increasing evidence highlighting the bidirectional relationship between respiratory disorders and psychiatric comorbidities, including anxiety, depression, and stress-related disorders. This bidirectional relationship influences COPD's pathophysiology and prognosis, with exacerbations and sleep disturbances further worsening psychiatric symptoms.[1]

Psychiatric comorbidities are common in respiratory disorders due to shared mechanisms, chronic disease stress, and social limitations. Symptoms like dyspnea are strongly associated with anxiety and panic, while the progressive nature of conditions like COPD often leads to depression. Due to comorbidity, they tend to experience the decreased health-related quality of life (HRQOL).[2]

QoL, encompassing physical, psychological, and social well-being, is significantly affected in respiratory disorders due to persistent symptoms and the psychological burden. Psychological conditions like anxiety and depression are vital considerations in assessing quality of life (QoL) in chronic diseases and require careful management. Although an association between COPD and depression is suggested, evidence is limited, especially in diverse disease severities, with a notable lack of data from our region.[3]

This study aims to explore the prevalence and impact of psychiatric comorbidities on QoL in respiratory disorders, emphasizing the importance of integrating mental health care into holistic, patient-centered management strategies.

AIM-

To study psychiatric comorbidities and their impact on quality of life in patients with respiratory disorders.

OBJECTIVES-

1. To examine the prevalence of psychiatric comorbidities, particularly anxiety and depression, in patients with respiratory disorders such as COPD, asthma, and interstitial lung diseases.
2. To assess the impact of psychiatric comorbidities on the quality of life (QoL) of patients with respiratory disorders.

3. MATERIALS AND METHOD

STUDY AREA-

The study was conducted in the department of psychiatry of a Tertiary care centre in Rajasthan.

STUDY POPULATION-

All consenting patients who visited the respiratory medicine department and referred to psychiatry OPD in Tertiary care centre, Rajasthan were considered for the study.

INCLUSION CRITERIA-

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1. Patients aged 18 years and older diagnosed with respiratory disorders such as chronic obstructive pulmonary disease (COPD), pulmonary TB, asthma, or interstitial lung diseases etc.
2. Patients willing to provide informed consent and participate in the study.
3. Patients with stable respiratory conditions, i.e., no recent exacerbations or hospitalizations within the last four weeks.
4. Patients capable of completing psychological assessments and quality of life questionnaires.

EXCLUSION CRITERIA-

1. Patients with acute respiratory infections or other non-chronic respiratory conditions.
2. Individuals with a history of severe psychiatric disorders (e.g., schizophrenia, bipolar disorder) unrelated to the study objectives.
3. Patients with significant cognitive impairments or neurological conditions that may interfere with assessment.
4. Those currently receiving palliative care for end-stage respiratory diseases.
5. Pregnant or breastfeeding individuals, due to potential confounding variables.

TOTAL SAMPLE SIZE = 78

SAMPLING TECHNIQUE - Purposive sampling technique

STUDY DESIGN - It was a cross-sectional study.

METHODOLOGY-

After taking permission from Scientific and Ethical committee of National Institute of Medical Sciences & Research, Jaipur and on the basis of inclusion and exclusion criteria, patients with respiratory diseases were included in the study. A written consent from patients were obtained after explaining the study to the patients.

The patients were assessed on OPD basis. The socio-demographic data was obtained on a specially designed semi structured proforma consisting of socio-demographic and clinical profile of the patients. Diagnosis was made according to ICD-10 criteria. The severity of psychiatric morbidity was assessed on the basis of Becks Anxiety Scale, Becks Depression Scale & WHO Quality of Life Scale. After collecting all the data proper statistical methods were applied under supervision of statistician.

3. RESULT & DISCUSSION

Sociodemographic & Clinical Profile- [n=78]

		Number of Patients	Percentage of Patients
AGE	18-30	02	2.56%
	31-45	20	25.64%
	46-60	**36**	**46.15%**
	61 & above	20	25.64%
SEX	**Male**	**64**	**82.05%**
	Female	14	17.95%
RELIGION	**Hindu**	**68**	**87.18%**
	Muslim	10	12.82%
EDUCATION	**Illiterate**	**32**	**41.03%**
	Primary	24	30.77%

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	Secondary	22	28.21%
	Graduate	-	-
OCCUPATION	Unemployed/Home-maker	16	20.51%
	Farmer	**34**	**43.59%**
	Laborer	18	23.08%
	Employed	08	10.26%
SOCIOECONOMIC STATUS	**Lower**	**62**	**79.49%**
	Middle	16	20.51%
	Upper	-	-
MARITAL STATUS	**Married**	**76**	**97.44%**
	Unmarried	02	2.56%
FAMILY TYPE	**Joint**	**48**	**61.54%**
	Nuclear	30	38.46%
DOMICILE	**Rural**	**78**	**100.00%**
	Urban	-	-
MEDICAL HISTORY	**COPD**	**74**	**94.87%**
	TB	06	7.69%
SUBSTANCE HISTORY	**Nicotine & its derivatives**	**52**	**66.67%**
	Alcohol	06	7.69%
	Both	06	7.69%
	None	26	33.33%

Comorbid Anxiety-(Beck's Anxiety Inventory)[4]

	Number of Patients	Percentage of Patients
MINIMAL/NO (0-7)	12	15.38%
MILD (8-15)	**24**	**30.77%**
MODERATE (16-25)	22	28.21%
SEVERE (26-63)	20	25.64%
	66/78	**84.62%**

Comorbid Depression-(Beck's Depression Inventory)[4]

	Number of Patients	Percentage of Patients
MINIMAL/NO (0-9)	22	28.21%
MILD (10-18)	**36**	**46.15%**
MODERATE (19-29)	16	20.51%
SEVERE (30-63)	04	5.13%
	56/78	**71.79%**

Quality of Life-(WHOQOL-BREF Scale)[5]

1. Physical Health

	Number of Patients	Percentage of Patients
Very poor quality of life (0-20)	**-**	-
Poor quality of life (21-40)	**20**	**25.64%**
Moderate quality of life (41-60)	26	33.33%
Good quality of life (61-80)	22	28.21%

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Very good quality of life (81-100)	10	12.82%

2. Psychological Health

	Number of Patients	Percentage of Patients
Very poor quality of life (0-20)	-	-
Poor quality of life (21-40)	**18**	**23.08%**
Moderate quality of life (41-60)	16	20.51%
Good quality of life (61-80)	42	53.85%
Very good quality of life (81-100)	02	2.56%

3. Social Relationships

	Number of Patients	Percentage of Patients
Very poor quality of life (0-20)	-	-
Poor quality of life (21-40)	**14**	**17.95%**
Moderate quality of life (41-60)	18	23.08%
Good quality of life (61-80)	28	35.90%
Very good quality of life (81-100)	18	23.08%

4. Environmental Health

	Number of Patients	Percentage of Patients
Very poor quality of life (0-20)	-	-
Poor quality of life (21-40)	**-**	**-**
Moderate quality of life (41-60)	-	-
Good quality of life (61-80)	20	25.64%
Very good quality of life (81-100)	58	74.36%

The demographic and clinical data show that most patients (46.15%) are aged 46–60 years, with a significant male predominance (82.05%). The majority identify as Hindu (87.18%). Educationally, 41.03% are illiterate, and 43.59% are farmers. Socioeconomic analysis reveals that 79.49% belong to the lower class. Nearly all patients (97.44%) are married, with a higher prevalence of joint families (61.54%) over nuclear families (38.46%). All patients reside in rural areas. Clinically, 94.87% have COPD, and 7.69% have TB. Substance use is common, with 66.67% using nicotine, 7.69% using alcohol, and 7.69% using both; 33.33% report no substance use.

Using Beck's Anxiety Inventory, 66 out of 78 patients (84.62%) had anxiety, with 30.77% mild, 28.21% moderate, and 25.64% severe symptoms. This aligns with Homętowska et al. (2022), who reported anxiety symptoms in 40–50% of patients.[6]

Similarly, 56 out of 78 patients (71.79%) had depression per Beck's Depression Inventory, with 46.15% mild, 20.51% moderate, and 5.13% severe symptoms. Homętowska et al. (2022) noted depression in 50% of COPD patients, compared to 36.5% in ACO and 23.24% in asthma, highlighting the need for targeted mental health care in these populations.[6]

The WHOQOL-BREF assessment revealed poor quality of life in 25.64% for physical health, 23.08% for psychological health, and 17.95% for social relationships. No very poor quality of

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life was reported, and environmental health showed no poor quality. These findings underscore the need for targeted interventions to improve well-being. In study by Ozoh et al. (2023) QoL scores were significantly lower in participants with asthma compared to those with 'no asthma'.[7]

4. CONCLUSION

This study highlights the high prevalence of psychiatric comorbidities, particularly anxiety (84.62%) and depression (71.79%), among patients with respiratory disorders, significantly impacting their quality of life. Poor quality of life was most prominent in the physical (25.64%), psychological (23.08%), and social relationship (17.95%) domains, underscoring the need for integrated mental health care. These findings emphasize the importance of a holistic, patient-centered approach to managing respiratory disorders, addressing both physical and psychosocial dimensions to improve overall health outcomes.

Conflict of interest: Nil

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