

# A Cross - Sectional Study to Assess the Breathing Efficacy Among Patients with Chronic Obstructive Pulmonary Disease (COPD) at Gims Hospital Gadag

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**Abstract:** *Chronic Obstructive Pulmonary Disease (COPD) is a leading cause of morbidity and mortality in India, affecting approximately 30 million people. This study aimed to identify the socio - demographic factors influencing COPD symptoms using the COPD Assessment Test (CAT) among 100 patients at GIMS Hospital Gadag. Utilizing a quantitative cross - sectional research design and purposive sampling, the data revealed significant associations between CAT scores and socio - demographic factors such as family income ( $x=17.23$ ,  $P<0.00063$ ) and tobacco use ( $x=7.921$ ,  $P<0.05$ ). These findings underscore the critical role of socioeconomic conditions and lifestyle behaviours in the management of COPD symptoms, advocating for comprehensive treatment approaches that integrate both medical and socioeconomic strategies.*

**Keywords:** COPD, socio - demographic factors, CAT score, family income, tobacco use

## 1. Introduction

Chronic pulmonary disorders, particularly Chronic Obstructive Pulmonary Disease (COPD), are a major cause of morbidity and mortality in India. COPD, characterized by progressive and not fully reversible airflow obstruction, includes symptoms of emphysema and chronic bronchitis. Emphysema involves alveolar wall destruction, while chronic bronchitis is defined by persistent cough and sputum production for at least three months over two consecutive years. With approximately 30 million people affected, India has one of the highest COPD mortality rates globally, with an age - standardized death rate of over 64.7 per 100,000.

## 2. Methods

Quantitative Cross sectional research design was adopted for the present study, to accomplish the objectives. COPD assessment test (CAT) was used to collect data. A sample of 100 COPD patients were selected in GIMS Hospital Gadag, by purposive sampling technique. The collected data were analysed using descriptive and inferential statistics.

## 3. Results

A significant association was found between CAT score and socio - demographic variables such as, **family income ( $x=17.23$ ,  $P<0.00063$ ):** There is a significant association between CAT score and family income, as the p - value (P) is less than 0.00063.

**Use of tobacco ( $x=7.921$ ,  $P<0.05$ ):** Assuming a standard significance level of 0.05, there is a significant association between CAT score and use of tobacco, as the p - value (P) is less than 0.05. The statement " $P>5.99$ " seems incorrect in standard reporting and might need clarification.

## 4. Discussion

The findings suggest socio - demographic factors that impact CAT scores among COPD patients is crucial for tailored management strategies. The significant associations found with family income and tobacco use suggest that socioeconomic factors and health behaviours play critical roles in COPD symptomatology. These findings underscore the importance of holistic approaches in COPD management that consider not only medical treatments but also socioeconomic contexts.

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