

A Cross-Sectional Study on Prevalence of Lung Diseases and Associated Factors in a Known Population: An Institutional Based Study

Anurag Vyas¹, Arun Kumar Anuragi^{1*}

¹Associate Professor, Department of General Medicine,
Rama Medical College Hospital & Research Centre, Pilkhuwa, Hapur, Uttar Pradesh, India.

ABSTRACT

Background: Lung diseases are one of the leading causes of death in developing countries. Therefore, a cross-sectional study was conducted to assess the prevalence of lung diseases and associated factors in a known population.

Materials and Methods: This was a cross-sectional study conducted in 140 participants of age group 20-60 years. Before commencement of the study ethical approval was taken from the ethical committee. All the participants of aged 20 years or above, staying for more than six months in the area were included in the survey. The respondents were also asked whether they had been informed by a doctor that they had a chronic respiratory condition. Data analysis was performed using the SPSS software version 11.

Results: In the present study total participants were 140 in which males were 90 and females were 50. The participants of age group 20-30 were 24(17.14%), 31-40 were 54(38.57%), 41-50 were 38(27.14%) and 51-60 were 24(17.14%). Smokers were 24(17.14%), non – smokers were 96(68.57%) and ex- smokers were 20 (14.28%). Lung diseases were prevalent in age group 31 - 40 years (8.57 %). Lung

diseases were prevalent in males (12.85%). Lung diseases were prevalent in smokers (15%).

Conclusion: Our study concluded that Lung diseases were prevalent in age group 31-40 years' smokers males.


Keywords: Lung Diseases, Smokers, Ex-Smokers.

*Correspondence to:

Dr. Arun Kumar Anuragi,
Associate Professor,
Department of General Medicine,
Rama Medical College Hospital & Research Centre,
Pilkhuwa, Hapur, Uttar Pradesh, India.

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INTRODUCTION

Lung diseases are one of the leading causes of death in developing countries.¹ Around 15% of all disability adjusted life years lost in Southeast Asia were due to lower respiratory infection, tuberculosis (TB), chronic obstructive pulmonary disease, and bronchial asthma.² Tobacco is reported as the first risk factor for disease in high-income North America and Western Europe and second only to high blood pressure globally according to a recent systematic analysis.³ It is proved that the strongest risk factors for airflow obstruction are smoking and exposure to environmental tobacco smoke.⁴ Chronic respiratory diseases are defined as chronic diseases of the respiratory tract and other structures of the lung. The most common diseases are asthma and chronic obstructive pulmonary disease. These diseases represent a challenge to the public health in both industrialized and developing countries because of their frequency and economic impact. In 1990, the World Health Organization/World Bank Global Burden of Disease study estimated the global prevalence of chronic obstructive pulmonary disease (COPD) to

be 9.33 per 1000 individuals for men and 7.33 per 1000 for women. The prevalence was observed to be higher in industrialized countries.⁵⁻⁷ Therefore; a cross-sectional study was conducted to assess the prevalence of lung diseases and associated factors in a known population.

MATERIALS AND METHODS

This was a cross-sectional study conducted in 140 participants of age group 20-60 years. Before commencement of the study; ethical approval was taken from the ethical committee. All the participants of aged 20 years or above, staying for more than six months in the area were included in the survey. The subjects were classified according to smoking status as follows: current smokers, who smoked regularly within one month prior to the interview; non-smokers', who never smoked or occasionally smoked; and ex-smokers, stopped smoking more than one month prior to the interview. Data analysis was performed using the SPSS software version 11.

RESULTS

In the present study total participants were 140 in which males were 90 and females were 50. The participants of age group 20-30 were 24(17.14%), 31-40 were 54(38.57%), 41-50 were 38(27.14%) and 51-60 were 24(17.14%). Smokers were 24(17.14%), non – smokers were 96(68.57%) and ex- smokers were 20 (14.28%). Lung diseases were prevalent in age group 31-40 years (8.57%). Lung diseases were prevalent in males (12.85%). Lung diseases were prevalent in smokers (15%).

Table 1: Demographic factors

Factor	N (%)
Age group	
20-30	24(17.14%)
31-40	54(38.57%)
41-50	38(27.14%)
51-60	24(17.14%)
Gender	
Male	90(64.28%)
Female	50(35.71%)
Smoking habit	
Smoker	24(17.14%)
Non-smoker	96(68.57%)
Ex-smoker	20(14.28%)

Table 2: Prevalence of lung diseases in relation to factors

Factor	Presence of disease N(%)
Age group	
20-30	2(1.42%)
31-40	12(8.57%)
41-50	7(5%)
51-60	5(3.57%)
Gender	
Male	18(12.85%)
Female	8(5.71%)
Smoking habit	
Smoker	21(15%)
Non-smoker	2(1.42%)
Ex-smoker	3(2.14%)

DISCUSSION

In the present study total participants were 140 in which males were 90 and females were 50. The participants of age group 20-30 were 24(17.14%), 31-40 were 54(38.57%), 41-50 were 38(27.14%) and 51-60 were 24(17.14%). Smokers were 24(17.14%), non – smokers were 96(68.57%) and ex- smokers were 20 (14.28%). Lung diseases were prevalent in age group 31-40 years (8.57%). Lung diseases were prevalent in males (12.85%). Lung diseases were prevalent in smokers (15%).

Chhabra et al. noted a higher prevalence of respiratory symptoms.⁸ A similar lower prevalence was observed among non-smoker males and females in studies reported from Chandigarh from both rural and urban areas and among teachers.^{9,10} However, a community-based study in the rural area of Kashmir reported a considerably higher prevalence that was attributed to domestic air pollution, lower socioeconomic status, poor housing facilities and overcrowding.¹¹

In an urban area of Kashmir, a prevalence of 5.7% for chronic bronchitis¹² was reported, while in a south Indian village, a prevalence of 3.3% was reported for chronic bronchitis.¹³

Studies from rural areas, especially in the colder regions of North India have reported a higher prevalence in females, which may be due to the exposure of women to domestic smoke pollution.¹⁴ Malik SK observed an increase in respiratory diseases with increasing age.¹⁵ Studies have suggested that poor management of asthma in childhood also affects lung growth and increases the risk of developing COPD at later ages.¹⁶ In people with asthma, moderate to high PA improves lung function.¹⁷ Patients with COPD can significantly improve their exercise tolerance and quality of life, and reduce symptoms of dyspnea and fatigue with only a minor increment in their leisure-time PA.^{18,19}

CONCLUSION

Our study concluded that Lung diseases were prevalent in age group 31-40 years smokers male population.

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