

Prevalence of pre chronic obstructive pulmonary disease and its associated factors in Korea

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Background/Aims: This research estimated the prevalence, patterns, and risk factors of pre-chronic obstructive pulmonary disease (COPD) using a nationwide data.

Methods: The data from the Korea National Health and Nutrition Examination Survey 2015–2019 were leveraged, and 4,377 participants aged 40–49 years who underwent spirometry with complete data were analyzed.

Results: Pre-COPD was defined as a forced expiratory volume in 1s/forced vital capacity ratio below the lower limit of normal (2.5th percentile) in individuals aged under 50 years without persistent respiratory symptoms, a history of asthma or inhaler therapy. The frequency and trend of pre-COPD were estimated based on characteristics such as pack-years and smoking status. A complex sample multivariable-adjusted regression model was employed to determine factors related to pre-COPD. The prevalence of pre-COPD was observed in 4.1% of populations (5.8% of men and 2.3% of women (Figure 1)). The prevalence was the highest in current smokers (7.3%), and lowest in never smokers (2.5%). Pre-COPD was observed in 7.8% of smokers with ≥ 10 pack-years, compared to 2.5% in smokers with < 10 pack-years.

Conclusions: In the multivariable-adjusted logistic regression model, male gender, lower educational level, smoking status, and pack-years were identified as contributing factors to the presence of pre-COPD. Ongoing observation of this pre-disease condition is needed, and further research is warranted.

