

## عنوان مقاله:

The Impact of Air Pollution on Lung Function: A Case Study on the Rickshaw Pullers in Dhaka City, Bangladesh

## محل انتشار:

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## خلاصه مقاله:

Background: Exposure to air pollution adversely affects the respiratory system. This study aimed to assess the lung capacity of rickshaw pullers in Dhaka city, Bangladesh and their exposure to polluted air and determine their perception toward air pollution-induced disorders. Methods: In this survey, a questionnaire and spirometry analysis were used to measure the lung function of ۳۵ subjects, who were nonsmokers and had no prior respiratory problems. A SP10BT spirometer was used in a standing position to measure the forced vital capacity (FVC), one-second forced expiratory volume (FEV<sub>1</sub>), FEV<sub>1</sub>/FVC, and peak expiratory flow (PEF). Data were analyzed using independent t-test. Results: The mean values of FVC, FEV<sub>1</sub>, and PEF were significantly lower in the experimental group (urban rickshaw pullers) than the control group (rural rickshaw pullers) ( $P < 0.001$ ). FEV<sub>1</sub>/FVC was also lower, while the difference was not significant. The majority of the subjects had various seasonal and environmental disorders since coming to Dhaka, and ۴۴% of the respondents mostly had eye irritation, fever, and cough during winter, which decreased their ability to pull their rickshaws. Conclusion: Air pollution had a measurable adverse impact on the pulmonary function of the urban rickshaw pullers compared to the rural control group.

## کلمات کلیدی:

Rickshaw pullers, Air pollution, Lung function, Perception

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