

**Respiratory Effects of Exhausted Vehicle Fume Exposure Among Traffic Police Officers
in Kandy Police Division, Sri Lanka**

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Abstract

Air pollution has become one of the significant public health problems in Sri Lanka over the last few decades. Exhausted automobile smoke from the increasing number of vehicles and unplanned urbanization directly contribute to air pollution. Daily exposure to exhausted vehicle smoke is frequently associated with increased morbidity from cardiovascular diseases, lung cancer, and respiratory diseases, such as bronchitis and respiratory tract infections. Traffic police officers working on roads, especially in urban environments, are occupationally exposed to exhausting vehicle fumes generated by motor traffic vehicles. Hence, the traffic police officers are at a greater risk of developing respiratory illnesses due to this occupational exposure. The present study aimed to investigate the prevalence of respiratory symptoms and their relationship with some selected variables among the traffic police officers in the Kandy Police Division, Sri Lanka, as Kandy city is identified as one of the most air-polluted cities in Sri Lanka. The study was performed as a descriptive cross-sectional study in the police stations located in the Kandy police division, Central province, Sri Lanka. One hundred sixty-three traffic police officers who were attached to the traffic units of the Kandy police division and who were active on road traffic duties were included in the study. Data was collected through telephone conversations using a structured interviewer-administered questionnaire that consisted of socio-demographic, occupational-related, and respiratory symptoms-related questions. The collected data were analyzed using Minitab 19 statistical software. The mean age of the participant was 47.8 ± 7.2 years. The reported prevalence of respiratory symptoms among traffic police officers were: coughing 22.7%, bringing up phlegm 27%, wheezing 11%, shortness of breath while walking 4.9%, pain or tightness in the chest 4.3%, and getting very tired in a short time 12.3%. The traffic police officers who were exposed to active or passive tobacco smoke had a higher risk of having cough ((OR: 1.14; $p = 0.009$), bringing up phlegm (OR: 1.12; $p = 0.005$) and attacks of wheezing (OR: 1.568; $p = 0.022$) compared to those who were not exposed to tobacco smoke. The current study results suggest that being exposed to active or passive tobacco smoke adds a higher risk of having respiratory symptoms like cough, bringing-up phlegm, and wheezing to the traffic police officers who are active on road traffic duties.

Keywords: *Air pollution, traffic police, vehicle fumes, Sri Lanka*

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