

## **Prevalence and Associated Factors of Selected Cardio-respiratory Symptoms and Peak Expiratory Flow Rate Measurement among Carpenters in Moratuwa Medical Officer of Health area**

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### **Abstract**

Indoor air pollution and exposure to hazardous particles in the air especially particulate matter (PM<sub>10</sub>) has a huge impact on the cardio- respiratory system. Carpenters are at a major risk of getting exposed to wood dust and other chemical vapors, therefore they are at higher risk of developing cardio-respiratory diseases. To determine the prevalence & associated factors of selected cardio- respiratory symptoms and measure the pulmonary function by Peak Expiratory Flow Rate (PEFR) among carpenters in Moratuwa Medical Officer of Health (MOH) area. Cross-sectional analytical study, conducted among 461 carpenters in 20 Grama Niladhari divisions of Moratuwa MOH area from April 2017 to January 2018 using multistage sampling. Pre-tested, interviewer-administered questionnaire and peak flow meter were used for data collection. Out of 443 respondents during the previous month most prevalent acute respiratory symptom was cough 61.6% (n=273) followed by wheezing 35.4% (n=157). The most prevalent chronic respiratory symptom was chronic cough 19.9% (n=88) and chronic phlegm 18.5% (n=82). Central chest pain was complained by 25.3% (n=112) complained of these, 24.8% (n= 110) of participants' chest pain had eased with rest. Hypertension was diagnosed in 17.6% (n=76) and 86.9% (n=385) had at least one cardio-respiratory symptom. More than half 60.7% (n=269) had PEFR <80% of their predicted values. There was a statistically significant association (p<0.05) between the presence of at least one cardio-respiratory symptom with age category, education level, working duration, awareness and practices to prevent dust exposure and family history of cardio-vascular diseases. Increased prevalence of cardio-respiratory symptoms and decrease PEFR was probably due to prolong exposure to wood dust. Occupational health programme of the ministry of health should target at risk work groups such as carpenters in providing services. Carpenters should adopt proper protective measures adequately in order to reduce the prevalence of symptoms.

**Keywords:** *Carpenters, Cardio-respiratory symptoms, Peak expiratory flow rate, Wood dust*