

## OP2

### **Prevalence of asthma and comparison of ventilator capacity of asthmatics (when free of asthma) and non asthmatics among workers in selected garment factories**

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#### **Introduction**

Asthma has been reported to be common among garment factory workers.

#### **Objective**

To determine the prevalence of asthma and to compare the lung functions among asthmatics and non asthmatics among garment factory workers

#### **Methods**

A descriptive comparison study was conducted among 774 workers of selected garment factories in the Ekala Industrial Area, Ja el. All workers who have served for a minimum period of one year in the factory were included in the study. An interviewer administered questionnaire was used to assess personal details and presence of wheezing, dyspnoea and cough and other relevant data. All those with wheezing and those with presence of both cough and dyspnoea in the absence of wheezing during the past one year were considered as asthmatics. Spirometry was performed using an electronic spirometer. Forced Vital Capacity (FVC), Forced Expiratory Volume in first second of FVC (FEV) and Peak Expiratory Flow Rate (PEFR) were assessed. The ventilatory capacity was compared among asthmatics and non asthmatics using Student T test, Mann Whitney U test or chi-squared test.

#### **Results**

The prevalence of asthma was 30% (95%CI: 26.7%, 33%). The mean ventilator capacity of asthmatics and non asthmatics respectively were as follows FVC: 2.24 L versus 2.39 L ( $p < 0.05$ ), FEV<sub>1</sub>: 2.17 L versus 2.37 L ( $p < 0.001$ ), PEFR (geometric mean): 5.87 L/sec versus 7.17 L/sec ( $p < 0.001$ ). The mean difference between the predicted normal values and observed values among asthmatics and non asthmatics were as follows: FVC: 0.53 L versus 0.58 L ( $p > 0.05$ ), FEV<sub>1</sub>: 0.30 L versus 0.25 L ( $p > 0.05$ ), PEFR (median): 1.21 L/sec versus 0.45 L/sec ( $p < 0.001$ ). Ninety three (40.3%) of asthmatics and 149 (27.5%) non-asthmatics had PEFR  $< 80\%$  of the predicted which was statistically significant ( $p < 0.001$ ).

#### **Conclusion**

Prevalence of asthma was high among garment factory workers. Ventilatory capacity and predicted normal values of asthmatics when free of asthma were affected in comparison to non asthmatics.