

# Work demands, air pollution and asthma: the risk factors for stress among traffic police officers in Malaysia.

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## Introduction

Stress in policing has been evident from substantive studies particularly in developed countries (Berg, Hem, Lau, Håseth, & Ekeberg, 2005). Air pollution has also been consistently associated with respiratory symptoms of asthma (Tamura, Jinsart, Yano, Karita, & Boudoung, 2003) Little is known however about the interaction between psychological work demand, air pollution, asthma and stress among traffic police officers who are highly exposed to traffic vehicular air pollution.

## Objective

A cross sectional study was conducted among traffic police officers in urban and rural areas in Malaysia to explore the interaction between the levels of stress, the prevalence of respiratory symptoms of asthma and their possible risk factors including the psychological work stressors and the exposure to particulate matter (PM<sub>10</sub>).

## Method

This study applied a psychological theoretical model adapted from the Model of Work Stress (Palmer, Cooper, & Thomas, 2004). Police stress questionnaire (PSQ) was distributed to assess psychological work stressors. Dustrak aerosol monitor was run to measure the level of particulate matters (PM<sub>10</sub>) at significant road junction during peak hours. The General Health Questionnaire (GHQ) and the International Union against Tuberculosis questionnaire (IUALTD) was used to measure mental health status and respiratory symptoms of asthma respectively.

## Results

The response rate was 45.3% (n=328). The average levels of PM<sub>10</sub> was

(0.273mg/m<sup>3</sup>) and higher in urban areas. The prevalence of stress was high (46.8%) and significantly higher among urban traffic police officers (p<0.05). There were 33 respondents (10.4%) who had been professionally diagnosed to have asthma. Operational (p<0.01) and organisational (p<0.01) police specific work stressors, asthma (p = 0.04) and the levels of PM<sub>10</sub> (p<0.01) were found to be significantly correlated with mental health status and well being even after adjusting for socio-demographical factors (e.g. age, sex and education levels).

## Discussion

This finding suggests that exposure to air pollution have an effect on mental health status and well-being. Air pollution-related respiratory symptoms of asthma and psychological work demand further increase the psychological stress suffered by the traffic police officers.

## Key words

Work demands, air pollution, asthma and stress.

## References

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