

Association Between Night-Shift Work, Sleep Quality, and Health-Related Quality of Life

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ABSTRACT

BACKGROUND: Night-shift work may adversely affect health. This study aimed to determine the impact of night-shift work on health-related quality of life (HRQoL) and assess whether sleep quality was a mediating factor. **METHODS:** A cross-sectional study was conducted among Malaysian manufacturing workers, aged 40 to 65 years. Participants completed a self-administered questionnaire on socio-demography and lifestyle factors, short Form-12v2 Health Survey (SF-12), and the Pittsburgh Sleep Quality Index (PSQI). Baron and Kenny's method, Sobel test and multiple mediation model with bootstrapping were used to determine whether PSQI score or its components mediated the association between night-shift work and HRQoL. **RESULTS:** Of the 494 participants, 177 (36%) worked night-shift and 51% were males. Mean age was 47±5 year. Night-shift work was associated with sleep impairment and HRQoL. Night-shift workers had significantly lower mean scores in all the eight SF-12 domains. Compared to non-night shift workers, night-shift workers were significantly more likely to report poorer sleep quality, longer sleep latency, shorter sleep duration, sleep disturbances, and daytime dysfunction. Mediation analyses showed that PSQI global score mediated the association between night-shift work and HRQoL. "Subjective sleep quality" and "sleep disturbances" were mediators for the association between night shift work and physical wellbeing, whereas "sleep latency" and "daytime dysfunction" were mediators with respect to mental wellbeing. **CONCLUSION:** Sleep quality partially explains the association between night-shift work and poorer HRQoL. Organisations should treat the sleep quality of night-shift workers as a top priority area for action in order to improve their employees' overall wellbeing

KEYWORDS: night-shift, quality of life, shift work, sleep quality, wellbeing

Association of Haze Episodes with Healthcare Utilisation Due to Haze-Related Illnesses at Public Healthcare Facilities.

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ABSTRACT

INTRODUCTION: Haze imposes a substantial disease burden on population especially in Southeast Asia region due to high frequency of haze episodes. Reduction of air quality level due to haze has resulted in substantial disease burden due to increase in healthcare utilisation (HU). This study aims to determine the association of haze and HU due to haze-related respiratory illnesses with a focus given on the exacerbation of bronchial asthma and chronic obstructive pulmonary disease (COPD). **METHODS:** A cross-sectional study was conducted through secondary data collection of haze/non-haze episodes as the study exposures and HU related to the exacerbation of bronchial asthma and COPD as the study outcomes. Data on haze/non-haze episodes and HU for four consecutive years (2012-2015) were retrieved from Department of Environment and Ministry of Health Malaysia respectively. **RESULTS:** In the four consecutive years, the percentage of haze episodes recorded in all stations was higher (67%) as compared to non-haze (33%) episodes. Means (SD) of patients diagnosed with exacerbation of asthma and COPD were also significantly higher ($p<0.05$) for inpatient 74(62.1) and outpatient 320(650.1) cases during haze episodes as compared to inpatient 3416.5) and outpatient 146(170.5) cases during non-haze episodes. **DISCUSSIONS:** Findings from this study indicated that haze episode incurred significant healthcare burden due to increase in MRU. The evidence from this study will help the policy makers to prepare and allocate resources to control future implications of haze-related illnesses.

KEYWORDS: haze, air pollution, respiratory illnesses, healthcare utilisation