

**ABSTRACT**

**The Impact of Sleep Quality on the Occupational Fatigue Outcome among Healthcare Shift Workers in Critical Care Setting**

Teo Chiang Hoon<sup>1\*</sup>, Tuan Hairulnizam Tuan Kamaruzaman<sup>1</sup>, Sarimah binti Abdullah<sup>1</sup>

<sup>1</sup> Emergency and Trauma, Biostatistic, Hospital Universiti Sains Malaysia, Penang, Malaysia

\*Corresponding author's email: yvonne\_tch@yahoo.com

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**Introduction:** Occupation-related fatigue and sleep loss are common among shift workers in the emergency department (ED), who deliver round-the-clock critical care service to patients. These factors affect their performance and impose unnecessary hazard to patients, while also endangering themselves. **Objective:** The study objectives are to estimate the prevalence of poor sleep quality and severe occupational fatigue; and to investigate the contributing factors of occupational fatigue among shift workers in critical care setting. **Methodology:** This was a 6-month cross-sectional questionnaire-survey study conducted at ED, Hospital Universiti Sains Malaysia in 2014. Participants were asked to fill-in the self-administrated validated questionnaire. Quality of sleep and occupational fatigue were measured using Sleep Quality Index (SQI) and Checklist Individual Strength (CIS-20R) questionnaires respectively. A number of 116 respondents were recruited via simple random sampling technique, to achieve 5% precision in estimating the prevalence of occupational fatigue, which was 56.4% in previous study in similar population. **Results:** This study estimated that the prevalence of poor sleep quality among ED healthcare workers was 6%. The prevalence of severe occupational fatigue was about 21.5%. Logistic regression showed two independent factors that were significantly associated with occupational fatigue outcome – type of profession ( $p = 0.032$ ) and quality of sleep ( $p = 0.04$ ). Professional healthcare staff are 9.6 times

higher odds (AOR, 95% CI: 1.22 – 75.66) to have severe fatigue compared to supporting group. Those who did not have good sleep quality are 2.7 times higher odds (AOR, 95% CI: 1.04 – 7.15) to have severe fatigue. **Conclusion:** The low prevalence estimation of poor sleep quality and severe occupational fatigue in this study could invariably be limited by the

sampling technique, which was done in only one centre, due to limited research funding. In view of the strong evidence between sleep deprivation and fatigue among shift workers, further research should be invested by policy makers to implement a circadian rhythm-friendly schedule, on top of improving their work environment.