

## Burnout Level and Sleep Deprivation Among Shift-Working AMO

Nursyahda Zakaria, Nor Haniza Zakaria, Munirah Ismail, Lee Kun Yun

Institute for Health Management, National Institutes of Health, MOH

### **ABSTRACT:**

**Introduction:** Shift work refers to a wide range of non-standard work schedules, including on-call/overnight duty, rotational timetables, and permanent night work that requires early rising from night-time sleep. Misalignment between the core circadian physiology and the work schedule due to shift work can result in sleepiness, sleep interruption, and sleep deprivation. Shift work is common among healthcare workers (HCW) to ensure round-the-clock healthcare services for quality patient care. Physical and mental health such as cardiovascular morbidity, burnout, and metabolic syndrome have been documented among many HCW. Assistant Medical Officers (AMO) are the backbones in many healthcare departments, including Accident and Emergency, Operation Theatre, and Primary Care. This study aimed to examine the effects of sleep deprivation and level of burnout among shift working AMO.

**Methodology:** A national cross-sectional study using Maslach Burnout Inventory - Human Service Survey (MBI-HSS) was conducted among AMOs working in Ministry of Health facilities from July to November 2019. Multistage stratified sampling was used to recruit 2033 study participants from 32 hospitals and 28 district health offices. Complex sampling analysis was performed.

**Results:** A response rate of 90.4 % (n= 1839) was obtained from the sampled population, in which 390 of them followed a shift work schedule. More than one-third (36.0%) of the AMOs working on shifts reported to have severe sleep deprivation with less than 6 hours of sleep with another one-quarter (24.9%) having only 6 to 7 hours of sleep daily. Among the AMOs with inadequate sleep (7 hours or less), 35.8% suffer from burnout symptoms. The prevalence of burnout was higher among sleep-deprived AMOs who performed more than five double shifts per month (51.3%) compared to those with only four double shifts or less (21.1%). Univariate analysis shows that AMOs on more than 7 night shifts and more than 5 double shifts per month were 2.1 and 3.6 times more likely to develop burnout. Additionally, shift-working AMOs who were older (more than 40 years old) and had longer years of service (more than 10 years) were also 3.5 and 2.3 times more likely to develop burnout than their counterparts.

**Discussion/Conclusion:** This study highlights the lack of sleep among AMOs working in shift and its association with a higher prevalence of burnout. With increasing patient load and human resource constraint, more AMOs are required to work on double shifts, putting them at risk of burnout. Apart from modified work rotation schedules that allow adequate rest time to recuperate, long term strategies need to consider proper human resource projection and distribution to prevent undesirable impact such as burnout syndrome among AMOs and other HCWs.

**KEYWORDS:** Assistant Medical Officers, Burnout, Sleep Deprivation, Shift Work