

Wake up to the prevalence of sleep problems and disorders in a remote mining operation

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BACKGROUND

Sleep disorders are estimated to affect 9% of adults, with sleep apnoea and insomnia amongst the most common. There is limited research into the prevalence of sleep problems and disorders amongst shiftworkers in mining operations. Shiftworkers frequently experience sleep loss (<7 hrs) due to roster design and the presence of sleep problems or disorders may exacerbate this loss, increasing the likelihood of accidents and poor health outcomes. Of concern, shiftwork disorder has been reported to affect 23-63% of shiftworkers. Therefore, this study aimed to quantify the prevalence of sleep problems and disorders amongst shiftworkers in a remote mining operation.

METHODS

Participants from a remote West Australian mining operation (n=88, 96% male) completed an online survey that determined self-reported height, weight, alcohol consumption, daytime sleepiness, and potential risk of sleep apnoea, insomnia and shiftwork disorder. Spearman correlation was used to examine relationships between alcohol consumption and sleep measures; logistic regression determined the relationship of body size, and risk of sleep apnoea, after adjustment for gender and age.

RESULTS

Prevalence of sleep apnoea, shiftwork disorder and alcohol consumption at hazardous and/or harmful levels was identified in 34%, 42% and 41% of participants, respectively. Obesity (>30kgm²) was identified in 26% of participants and was related to a 12-times (p=0.001, CI=3.1-47.9) increase in the risk of having sleep apnoea compared to healthy weight participants. The prevalence of clinical insomnia was 7% and was related to daytime sleepiness (r=0.257, p=0.016) and alcohol consumption (r=0.260, p=0.014).

CONCLUSION

The prevalence of sleep apnoea and shiftwork disorder amongst miners was high compared to the general population. Sleep apnoea was found to be related to obesity and alcohol consumption at hazardous and/or harmful levels. Therefore, shiftwork mining operations should consider deploying programs that aim to identify and treat sleep disorders and promote a healthy lifestyle.