National Journal of Physiology, Pharmacy and Pharmacology

RESEARCH ARTICLE

Influence of altered circadian rhythm on quality of sleep and its association with cognition in shift nurses

Nagalakshmi Vijaykumar[1], Shashank Kiran[2], Karne S L[1]

[1]Department of Physiology, SDM College of Medical Sciences and Hospital, Dharwad, Karnataka, India, [2]MBBS Student, SDM College of Medical Sciences and Hospital, Dharwad, Karnataka, India

Correspondence to: Nagalakshmi Vijaykumar, E-mail: drlakshmi26@yahoo.com

Received: November 03, 2017; **Accepted:** November 28, 2017

ABSTRACT

Background: Exposure to shift works and especially to night shifts goes against the circadian rhythm of the social man which brings about a multitude of disruptive effects on health such as sleep disturbances, day sleepiness, decreased cognitive performance, fatigue, increased risk of accidents, poor quality of life, and vigilance troubles. **Aims and Objectives:** Evaluate sleep quality and its association with cognition among hospital shift working nurses. **Materials and Methods:** This is a cross-sectional study to investigate the quality of sleep and association with cognition among shift working nurses. 50 of each night, day shift workers and those who never exposed to shift work participated in this study (n = 150). Sleep quality and seven domains of sleep, subjective sleep quality, sleep latency, sleep duration, habitual sleep efficiency, sleep disturbances, use of sleeping medication, and daytime dysfunction were assessed using the Pittsburgh sleep quality index (PSQI) questionnaire. Cognitive performance was ev aluated using reaction time (RT) test. Inter- and intra-group analysis was done using ANOVA and Tukey's *post hoc* analysis using SPSS 20 software. **Results:** Global score of PSQI, subjective sleep quality, sleep duration, and sleep medication was statistically high among night shift nurses suggesting poor sleep quality compared to day shift and controls (P = 0.021, P = 0.021, P = 0.00, P = 0.00). Intragroup analysis shows that simple visual RT and choice visual RT are significantly high in night shift nurses when compared to day shift and controls (P = 0.00). Positive correlationwas found between global PSQI score with RT (r = 0.096). **Conclusion:** Night shift workers have poor quality of sleep when compared to day shift workers and those who were never exposed to shift work. Our study also concludes that poor quality of sleep has strong association with reduced cognition.

KEY WORDS: Biological Clock; Intellectual Function; Shift Workers; Sleep Latency

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Website: www.njppp.com	Quick Response code
DOI: 10.5455/njppp.2018.8.1144629112017	