

The association between sleep quality, cortisol profile and attention in nurses: A cross-sectional survey

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Nursing staff have to work shifts, tend to have poor sleep quality. Sleep quality is associated with HPA axis and cortisol secretion which affects the level of vigor after awakening. The purpose of the study was to explore the relationships between the nocturnal sleep quality and diurnal salivary cortisol profiles and attention on day shift nurses. This study was conducted with a prospective, cross-sectional study design. Participants completed CPSQI to distinguished poor sleepers (PSQI>5) and good sleepers (PSQI<5). The random sampling includes 32 nurses in the PSQI≤5 group and 29 nurses in the PSQI>5 group. Each participant collected their sleep diaries and actigraphy data, followed by four saliva samples and attention before work on a single work day in the fourth week. The study shows that, the poor sleep quality group exhibited earlier wake-up times, had a flatter Cortisol Awakening Response (CAR) and a flatter morning to evening slope and poor attention than good sleep quality group. Poor sleepers had a smaller diurnal cortisol slope and poor attention than good sleepers, flat diurnal deviation and indicate the dysregulation of the HPA axis function affect attention. Nursing staff are advised to construct sleep patterns that are optimized for maintaining work safety.

Biography

Shu Fen Niu is an Assistant Professor of the Post-Baccalaureate Program in Nursing, College of Nursing, Taipei Medical University, Taipei, Taiwan. She has her expertise in nursing and health care. She examined extensive evidence of cortisol profiles, sleep quality; fatigue and concentration levels with nursing shift work. She has published several scientific articles in international scientific journals in areas such as the shift work on nurses' sleep quality, circadian rhythm and occupational health.

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