Insomnia, anxiety, and heart rate variability among nurses working different shift systems in Taiwan
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ABSTRACT
Aims. To investigate the effect of different work shift systems upon the health status of nursing staff.

Background. The impact of working different shift systems upon the health of nursing staff has not been discussed extensively in the literature and is worth exploring.

Design. The study used a cross-sectional comparative design to investigate the differences in levels of insomnia, anxiety and heart rate variability of nursing staff members who worked different shift systems.

Methods. Participating in the study, performed August 3–31, 2010, were 138 members of the nursing staff of two hospitals in Taiwan. Data were collected using the Chinese versions of the Athens Insomnia Scale and the Beck Anxiety Scale questionnaires and a series of daily electrocardiograms recorded immediately upon completion of each participant's work shift. A binary logistic regression model was used for the analysis.

Results. Although the difference between the health status of the nursing staff undertaking non-shift work and those undertaking permanent shift work is not obvious, the health status of those carrying out non-permanent shift work is obviously poorer than that of those carrying out non-shift and permanent shift work.

Conclusions. Non-permanent shift work is one of the main factors causing adverse effects on the physical and spiritual health of nursing staff. In the long run, the quality of nursing services may decrease and some nursing staff may even quit. Therefore, when the implementation of a shift work system cannot be avoided, a practice of permanent shifts for nurses is preferable.

Keywords: anxiety, binary logit regression model, heart rate variability, insomnia, nursing management, ...