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Conference contribution :

Dahlgren, A., Epstein, M., Söderström, M. & Tucker, P. (2017). *Nurses' strategies for managing sleep when starting shift work – implications for interventions targeting sleep behaviours in a shift work population*. *Sleep Medicine*, (pp. e73

<http://dx.doi.org/10.1016/j.sleep.2017.11.209>

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Poster presentation at the World Sleep Congress, Prague, 7-11th October, 2017. Abstract published in *Sleep Medicine*, Dec 2017, Volume 40, Supplement 1, e73. <http://dx.doi.org/10.1016/j.sleep.2017.11.209>

Nurses' strategies for managing sleep when starting shift work – implications for interventions targeting sleep behaviours in a shift work population

Dahlgren A, Epstein M, Söderström M, Tucker P

Introduction: Shift work is related to short and disturbed sleep. Various aspects of a shift schedule will produce different opportunities and conditions for sleep depending on how they interact with circadian rhythms and the homeostatic drive for sleep. A third factor influencing sleep between shifts is the activation of the stress system. The aim of the current study was to examine sleep behaviours and strategies that nurses used when starting shift work and determine which sleep behaviours should be promoted when developing a programme for sleep interventions for newly graduated nurses.

Material and Methods: 11 (mean age 29.1±8) newly graduated nurses (3-12 months work experience) from different hospitals in Sweden were recruited for a semi-structured interview (approx. 45 min). Deductive content analysis was used to examine sleep strategies related to the homeostatic and circadian regulation of sleep, and to managing stress.

Results:

In relation to *morning shifts* (starting 6:45h) most nurses perceived sleep as somewhat disturbed. Some had a strategy of undertaking activities that helped them unwind before bedtime, such as having a shower, watching TV, surfing the Internet or using relaxation techniques. One nurse had a strategy of getting up early in the morning before a morning shift in order to facilitate sleep in the evening, thereby enhancing the homeostatic drive for sleep. One nurse tried to keep her bed times constant despite irregular work hours in order to maintain a stable circadian rhythm.

In relation to *evening shifts*, few experienced problems with sleep. Most had a lie-in before starting an evening shift and were being quite inactive before the shift started. Most nurses reported sleep problems when an evening shift was followed by a morning shift, i.e. a *quick return*, with many having problems unwinding and stopping thinking about work before bedtime. A few nurses described experiencing stress from knowing that their sleep would be short. Many had a strategy of undertaking other activities to unwind (see examples from morning shifts) before going to bed. A few went to bed straight away but described experiencing difficulties falling asleep. A few who reported no problems with sleep during quick returns said that they undertook activities that made them detach from work, with one regularly using a relaxation technique. The five nurses who worked *night shifts* had strategies of either sleeping in the evening before the nightshift, or staying up as long as possible the night before, thereby reducing the homeostatic drive for sleep during the shift.

Conclusions: Newly graduated nurses would probably benefit from a sleep programme based on cognitive behavioural therapy techniques that are modified to fit shift workers. Behaviours and strategies that should be targeted are: routines and techniques for unwinding before bed time; sleep behaviours that promote building up enough homeostatic pressure for initiating sleep (e.g. not having long lie-ins before evening

shifts that are followed by morning shifts); and sleep behaviours that promote a stable circadian rhythm.

Acknowledgements: This study was funded by AFA Insurance (ref. 150024).