Work and sleep

The effects of stress, physical work environment and scheduling
– a prospective study using the SLOSH database

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Method

This longitudinal study was based on two waves (year 2008=T1, year 2010=T2) of SLOSH, The Swedish Longitudinal Occupational Survey of Health, an approximately representative sample of the working population in Sweden. Inclusion criteria: gainfully employed at both time points and not suffering from sleep disturbances at T1 (n=5741, 54 % women, 46 % men, aged 24-72 years at T2). 441 people (8 %) developed sleep disturbances between T1 and T2, measured by the Karolinska Sleep Questionnaire. Logistic regression was made in five hierarchical models with new cases of disturbed sleep as the dependent variable. The predictors were divided into four categories corresponding the change of exposure between T1 and T2; increased or decreased levels as well as high or low levels at both time points. To analyse reversed causality, sleep disturbances at T1 were included as a predictor in three models with stress, demands and low social support as dependent variables.

Results

When adjusted for socio-demographics, physical and psychosocial work environment factors and work hours, increased levels of stress were associated with an OR of 2.9 (95% CI 2.0-4.3) for developing disturbed sleep. High levels of stress at both time points showed an OR of 2.8 (1.9-4.2). Increased levels of demands showed a weaker association, OR=1.8 (1.2-2.6), whereas high levels of demands did not yield a significant result. Control did not show any significant results on new cases of sleep disturbances, nor did changes in working hours. Among the physical work environment variables only an increase in exposure to excessive heat, cold or draught showed a significant OR of 1.7 (1.1-2.8). In the reversed model, disturbed sleep at T1 did not show any significant results on new cases of high demands or low social support, but showed an increased OR of 3.1 (2.9-4.3) on new cases of stress.

Conclusions

Mainly stress related variables were related to new cases of disturbed sleep, and there seem to be a reciprocal relationship between sleep disturbances and high levels of stress.