



Insomnia symptoms and their association with workplace productivity: cross-sectional and pre-post intervention analyses from a large multinational manufacturing company

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Abstract

Background

Symptoms of insomnia are common and might impact work productivity. We investigated the relationship between insomnia symptoms and workplace productivity in a global manufacturing company.

Methods

Within an uncontrolled, [cross-sectional study](#), employees from a US-based company were invited to participate in an online evaluation comprising the Sleep Condition Indicator (SCI) measuring symptoms of insomnia (high score indicating better sleep), 2 items of the Work Productivity and Impairment Index (WPAI) measuring ‘presenteeism’ and ‘absenteeism’ (high score indicating loss of work productivity) and 1 item of the [Perceived Stress Scale](#) (PSS) from January 2015 onwards. Pre-post, within-subject data were collected to preliminary test effects of ‘sleep tips’ and digital [cognitive behavioral therapy](#) (dCBT).

Results

In 2798 employees [72% male; mean age 46.3(*SD*11.8) yrs] sleep was poorest in plant staff [SCI = 3.70(2.73)], then retail staff [4.34(3.02)], then office staff [4.95(2.83): overall $F(2,2786) = 43.7, P < .0001$]. More insomnia symptoms were associated with WPAI presenteeism ($r = -.489, P < .0001; R^2 = 23.9\%$). Insomnia symptoms also were the strongest predictor of work-related productivity, with stress only contributing a further 9%. A regression model for 'absenteeism' was statistically significant but of limited [predictive value](#) ($R^2 = 3.4\%$). In a sample of 214 employees with pre- and post-intervention data, the SCI of those exposed to sleep tips significantly increased from 5.36(3.28) to 6.01(3.22), [$t(123) = -3.02, P = .003$] and from 3.08(2.24) to 6.03(2.97) for those who accessed dCBT [$t(89) = -8.40, P < .001$].

Conclusion

Symptoms of insomnia are associated with poor work productivity. Additionally, targeted insomnia interventions may offer potential to improve sleep and work productivity.

