Category: Psychosocial dimensions of work-related musculoskeletal disorders

[146] Effects on Physical Behaviors of a Workplace Intervention Aiming at Promoting Recovery in Office Workers with Flexible Work

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Introduction: Flexible work arrangements (FWAs) may allow employees to structure their work to promote sufficient physical activity and sleep, which are key components of health-promoting physical behaviors that are important for musculoskeletal health. However, FWAs may challenge employees' ability to detach from work, which may result in less physical activity and sleep. Since detachment may be associated with sleep patterns and physical activity in FWAs, interventions promoting detachment could facilitate these behaviors. Despite this, interventions targeting detachment and its potential impact on physical behaviors, including sleep, remain scarce. This study examines the effects of a workplace intervention on the 24-hour composition of physical behaviors among office workers with flexible work.

Methods: The intervention comprised an individual-level course developing digital skills to increase the ability to plan, structure, prioritize, and gain control over work, and a workgroup-level workshop to create common rules and routines for flexible work. Accelerometer and diary data were collected to document sleep and physical activity at baseline in an intervention group (receiving both intervention activities, *n*=27) and a control group (no intervention, *n*=21), and at a 12-month follow-up of both groups after the intervention. Using compositional data analysis, we calculated two log-transformed ratios, i.e. ILR1: sleep relative to time awake, and ILR2: physical activity relative to inactivity within time awake. Intervention effects were analyzed using Repeated Measures MANOVA and ANOVA.

Results: In the intervention group, sleep increased from 26% of the day at baseline to 29% at follow-up, corresponding to an increase of about 45 minutes, while active time remained at 6% and inactivity decreased from 68% to 65% of the day. In contrast, the control group experienced a decline in sleep from 29% to 27%, a slight increase in active time from 5% to 6%, and a rise in inactivity from 66% to 67%. The intervention significantly affected sleep relative to time awake (ILR 1), whereas no significant differences in physical activity relative to inactivity (ILR 2) were observed between the groups.

Discussion: Our findings suggest that the intervention helped office workers to increase their time in sleep relative to time awake, likely through better detachment from work. The effect on physical activity was insignificant, indicating that the intervention primarily facilitated recovery during sleep rather than promoted activity throughout the day. Although health outcomes were not directly measured, the findings may inspire musculoskeletal disorder (MSD) prevention in flexible work, as insufficient recovery is a known risk factor for MSDs.

Conclusion: The intervention successfully increased sleep in the intervention group compared to the control group but did not significantly affect physical activity relative to inactivity. This suggests employers can support better recovery from work among employees with flexible work by implementing strategies to enhance detachment at individual and workgroup levels. Improved recovery through longer sleep may, in turn, contribute to preventing MSDs.