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Sleep problems as a mediator between work stress and the long-term trajectories of work ability from midlife to retirement

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Abstract

Supporting work ability is crucial for sustainable and prolonged employment. Different work strain factors and sleep problems are known independent predictors of work ability. However, there is little research whether the sleep problems mediates the association between work strain factors and work ability. This study examined whether mid-life work stress, defined as job strain and effort-reward imbalance (ERI), predicts work ability trajectories observed over 12 years from midlife to retirement age and whether sleep problems mediate the association between work stress and work ability trajectories. The study cohort consisted of 2707 Finnish municipal employees. Trajectories of a single-item work ability score were identified using the group-based latent trajectory analysis. Multinomial logistic regression analysis was used to analyze the association between baseline job strain and ERI and the trajectories. Percentage of excess risk mediated and counterfactual mediation analysis was calculated to examine baseline sleep problems as a mediator of these associations. Four work ability trajectories were identified: 'Stable Excellent' (5%), 'Stable Good' (71%), 'Moderate' (19%) and 'Low



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decreasing' (5%). After adjusting for covariates, both job strain and ERI were independently associated with a greater likelihood of belonging to the lower work ability trajectories compared to 'Stable Good' work ability trajectory. Sleep problems explained the association of job strain by 38% and of ERI by 54%. Mid-life work stress, as described by job strain and ERI, is associated with employees' work ability in the last years preceding pensionable age. Sleep problems seem to be a potential mediator in these associations.

Keywords: job strain; effort-reward imbalance; insomnia; pensionable age; aging employee