



EAPM 2018

6TH ANNUAL SCIENTIFIC CONFERENCE OF THE
EUROPEAN ASSOCIATION OF PSYCHOSOMATIC MEDICINE · EAPM ·
INNOVATIVE AND INTEGRATED APPROACHES
TO PROMOTE MENTAL AND PHYSICAL HEALTH
Verona (Italy), 27-30 June 2018

Longitudinal effects and mediators of psychosocial work characteristics on somatic symptoms

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OBJECTIVE: The effects of adverse psychosocial work characteristics have been extensively studied and research has recently begun to focus on the association with somatic symptoms. Prospective evidence is however sparse and mixed. In addition, depression and anxiety might mediate the effects. This study therefore aimed to examine longitudinal effects of psychosocial work characteristics on somatic symptoms and the potential mediation by anxiety and/or depression.

METHODS: Longitudinal data from 352 individuals free of potentially stress-related chronic disease were used. Somatic symptoms were measured by 19 items of an established list of complaints at baseline and six year follow-up. Adverse psychosocial work conditions were measured by the effort-reward-imbalance (ERI) model and over-commitment (OC). Adjusted (socio-demographics, social status, lifestyle, and baseline symptoms) linear regression models estimated effects of the ERI model (ERI ratio, effort, reward, OC, and the ERI ratio × OC interaction) on somatic symptoms. In addition, cross-lagged relationship between ERI ratio and somatic symptoms was estimated by structural equation modelling. Furthermore, single and multiple mediation by anxiety and/or depression was investigated.

RESULTS: A strong longitudinal effect of the ERI ratio, as well as of its subcomponents, and OC on somatic symptoms was found (all Bs \geq | 0.49 |; p-values \leq 0.004). These findings were confirmed in the cross-lagged model. Moreover, the ERI ratio × OC interaction was significant (p-value = 0.047). Multiple mediation analyses revealed especially anxiety to mediate the effect of work stressors on somatic symptoms (Sobel test = 0.007).

CONCLUSIONS: Adverse psychosocial work conditions prospectively affect somatic symptoms. This effect is potentially moderated by OC, and mediated by anxiety.

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