

On the relation between psychosocial work environment and musculoskeletal symptoms

A structural equation modeling approach

av

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AVHANDLING

för avläggande av filosofie doktorsexamen i psykologi,
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Abstract

The aim of the present thesis was to investigate the relation between aspects of the psychosocial work environment and musculoskeletal symptoms including the testing of process models of the potential mediating mechanisms of felt stress and perceived fatigue, and the potential moderating mechanism of physical workload.

This thesis is based on four empirical studies. Studies I and II were cross sectional studies based on questionnaire surveys among blue-collar workers at Swedish assembly plants and elderly female computer users in four European countries, respectively. Studies III and IV were two-wave longitudinal cohort studies based on questionnaire survey data among elderly- and child-care workers in Swedish human service organizations. In all of these studies, proposed models of the relation between aspects of the psychosocial work environment and musculoskeletal symptoms were tested against empirical data using structural equation modeling (SEM).

In general, the results indicate a significant relation between the psychosocial work environment (job demands and psychological workload) and musculoskeletal neck/shoulder and back symptoms. The results further suggest that, although psychological workload seems to be important for the development of symptoms, it may be of less importance for other processes such as recovery from symptoms. Support was found for the hypothesized mediating mechanisms of felt stress and perceived fatigue. No support was however found for the hypothesized interaction effect of psychosocial and physical stressors (psychological and mechanical workload) on musculoskeletal symptoms.

In order to enhance our understanding of stress at work and its relation to musculoskeletal symptoms, it is important to continue and to extend the empirical testing of hypothesized process models in this area. It is of crucial importance to investigate the shapes of the unfolding effects and optimal time lags (i.e. how the effects develop over time and what time frames should be considered). Addressing these issues will enable a proper design of data collection and specification of process models to be tested against empirical data.

Key words: Psychosocial work environment, felt stress, perceived fatigue, musculoskeletal symptoms, process models, mediation, moderation, structural equation modeling.