

THE DUTCH CONCERTED RESEARCH ACTION ON  
OCCUPATIONAL FATIGUE: THE ROLE OF  
PSYCHOSOCIAL WORK CHARACTERISTICS

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Occupational fatigue, job stress and related psychological problems and disorders like burnout, are pressing social problems in many countries. For instance, in The Netherlands about one-third of all work related mental disability claims is stress-related. Therefore, in 1996 a large-scale 6-year concerted research action on occupational fatigue was initiated that integrates psychological and medical perspectives. More specifically, four lines of research are included: (1) experimental research in work psychology; (2) clinical and organizational field research (3) epidemiological research and (4) occupational health research. In total about forty (doctoral and post-doctoral) research projects are included. A large number of universities, research institutes, occupational health services, companies and unions contribute to the program in a combined effort to increase scientific knowledge with respect to the prevalence, antecedents and consequences of occupational fatigue. In addition, work is done in the fields of assessment, prevention and treatment in order to develop evidence-based diagnostic, preventive and therapeutic tools for practice

The aim of this symposium is to discuss four projects from the research program that specifically focus on psychosocial factors that are related to occupational fatigue. After a short introduction of the concerted research action, a large-scale prospective cohort study is presented on the incidence of fatigue in the working population and its psychosocial antecedents. It appears from this study that – amongst others – interpersonal relationships, decision latitude and emotional demands are among the main antecedents. In the second contribution these demands are studied more in depth in a sample of service workers, using the so-called Demand-Induced Strain Compensation Model, which builds upon and expands the well-known Job Demand Control Model. Another factor that – according to the cohort study – seems to be related to occupational fatigue is lack of decision latitude. This work characteristic lies at the core of the concept of self-managing teams on which the third contribution of this symposium concentrates. These teams seem to be healthy for some but not for all. The final contribution focuses on an area that has been traditionally neglected by occupational health psychology: the interference of work and home.

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FATIGUE IN THE WORKING POPULATION:  
THE ROLE OF PSYCHOSOCIAL WORK  
CHARACTERISTICS AND OCCUPATIONS

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Fatigue has attracted renewed attention in occupational (mental) health research because it may affect the individual's performance and ability to function in the occupational and the home settings, and may lead to sickness absence and work disability. For the development of effective preventive measures for fatigue, insight into the risk factors for the onset of fatigue is of paramount importance. Beyond linking risk factors to fatigue across all employees, occupations or job titles might help identify specific groups at risk and, in particular, occupations might be an easy entree for intervention. In the present study we used the data of the large-scale epidemiological Maastricht Cohort Study of "Fatigue at Work" to examine psychosocial work characteristics as possible risk factors for the onset of fatigue and to investigate differences in fatigue across occupations.

To explore whether psychosocial work characteristics, measured at baseline, predict the onset of fatigue 1-year later, follow-up data of 6522 male and 2311 female employees were used. To identify occupations high and low on fatigue and to examine the between-occupation variance for fatigue, 131 occupations with at least 20 employees were studied.

Linear regression analysis showed that psychosocial work characteristics were independently related to the onset of fatigue. Additional logistic regression analyses revealed that low decision latitude (OR 1.59 in men; OR 1.51 in women) and low coworker support (OR 1.45 in men; OR 1.78 in women) increased the risk for fatigue. Conflict with coworker (OR 2.12) was strongly related to future fatigue in women, and high emotional demands (OR 1.47) were related to future fatigue in men. The ranking of occupations according to fatigue showed considerable occupational differences. Occupation, as an additional measure of the work environment that is not dependent on the perceptions of the job occupants, explained only 3.6% of the observed differences in fatigue. In addition, occupation added relatively little explanatory information beyond the perceived psychosocial work characteristics.

The longitudinal findings provided suggestive evidence for the etiological role of psychosocial work characteristics in the onset of fatigue. Notably, good interpersonal relationships and high decision latitude were demonstrated to be important aspects that should be addressed in preventive measures. The findings also showed that the use of occupation exclusively seems to be an inadequate entree for intervention; instead, it is probably more appropriate to use supplementary information about the work environment as perceived by the job occupant.

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TESTING THE DISC-MODEL IN SERVICE WORK:  
PREDICTING EMOTIONAL EXHAUSTION

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One of the most striking changes in the world of work is the shift from industrialized jobs to service-oriented jobs. In line with the changing nature of work, the type of job demands has changed. While cognitive and behavioral (or physical) job demands are still important, emotional demands have gained importance. Therefore, in order to cope with those different job demands, cognitive, behavioral and emotional job resources are important too.

The recently developed Demand-Induced Strain Compensation (DISC) Model tries to encompass these different kinds of job demands and job resources. In a similar vein, the model also encompasses different types of health outcomes. Especially, burnout seems to be an important outcome in modern service-oriented jobs, where working with recipients constitutes the core of the job. One of the major assumptions of the DISC Model is that strong significant relations between job demands, job resources and health outcomes are most likely to be observed when they are all qualitatively identical, the so called "Triple Match Principle" (TMP). That is, not only should there be a match between specific demands and corresponding resources, but also between demands and resources with regard to a particular health outcome. For instance, a particular combination of (high) *emotional* demands and (low) *emotional* resources will lead to a particular high risk of reduced *emotional* health, such as emotional exhaustion, a core dimension of burnout. The purpose of the present study is to test the assumptions of the DISC Model in two human service organizations.

The DISC assumptions will be tested by hierarchical regression analyses. For each type of job demand, each type of job resource and each type of health outcome, one variable will be used as a specific indicator. Job demands will be measured by means of workload (cognitive), physical demands (behavioral), and emotional demands (emotional). Job resources will be measured by job autonomy (cognitive), instrumental support (behavioral), and emotional support (emotional). The health outcomes will be measured by active learning behavior (cognitive), physical complaints (behavioral) and emotional exhaustion (emotional). In general, results show that a particular match between demands and resources has the highest predictive validity with regard to the qualitatively similar health outcome. Hence, empirical evidence was found for the TMP of the DISC Model in two samples of human service employees.

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SELF-MANAGING HEALTHCARE TEAMS: HEALTHY  
FOR SOME BUT NOT FOR ALL

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Today, Dutch health care organizations face a number of challenging developments. For instance, workload increases as a consequence of the growing client population, clients are increasingly demanding, and absenteeism levels are rising. In response to these challenges Dutch health care organizations explore the possibilities of self-managing teamwork. A self-managing team is a group of workers who are jointly responsible for a well-defined and meaningful piece of work. Team members are supposed to be able to perform a variety of tasks and the team has considerable decision authority concerning the execution of the tasks, the planning of work schedules, the ordering of materials, and the coordination with other teams. The favorable work conditions that are associated with self-managing teamwork, e.g. increased autonomy and variety, are supposed to bring forth happier, healthier, and less fatigued workers.

To date, we know little about the effects that self-managing teamwork exerts on the mental health of workers, especially in health care settings. We know even less about individual differences between workers in their reactions to this kind of work organization. In the present study we investigated the effects of self-managing teamwork on worker's mental health (i.e. occupational fatigue, stress complaints and positive health effects such as motivation).

Data were collected of 900 members of 86 self-managing health care teams in nursing homes and domiciliary care organizations. Multilevel procedures were used to analyze the data. Results indicated that while a team as a whole may well have considerable autonomy, this does not necessarily imply that all team members are equally autonomous in their own daily work. Responsibilities were often unevenly distributed among team members, resulting in different levels of individual autonomy. Moreover, positive effects on occupational fatigue and motivation were found only for those team members whose individual autonomy increased. Individual autonomy was elevated for team-members with high self-efficacy and positive social relationships with coworkers as compared to employees with low self-efficacy and less positive relationships. As such, working in a self-managing team context may reduce occupational fatigue, or be healthy, for some team members but not for others.

Apparently, providing a team with autonomy or far-reaching responsibilities is no guarantee that individual team members will benefit. In practice this may mean that organizations that implement self-managing teams for the purpose of preventing or reducing mental health problems should not concentrate exclusively on the design of team tasks. They should also pay due attention to the distribution of tasks among team members and to the impact of individual differences and team process.

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## JOB STRESS, WORK-HOME INTERFERENCE AND FATIGUE IN WORKING COUPLES: CROSSOVER EFFECTS

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Striking changes have occurred during the past two decades in the composition of the working force, as well as in the nature of work itself. For instance, a growing proportion of women is participating in the working force, and consequently the number of dual-earner couples is rising rapidly. It follows that, today, both female and male workers have considerable domestic responsibilities in addition to their work obligations. Moreover, work and private lives have become more interwoven, due to flexible work time schedules, overwork, homework and telework.

There are strong indications that due to these changes, workers are facing greater pressures at home and at work. Recent statistics reveal that 30% to 40% of Dutch workers experience serious conflict or interference between demands at work situation and family or domestic responsibilities. We define work → home interference as the extent to which a person's functioning at home is hampered by demands made upon him or her at work

Previous research showed that those who perform demanding stressful jobs, experience more work → home interference and report more fatigue than workers in less stressful jobs. Moreover, there is strong evidence for a mediating role of work → home interference in the relationship of stressful job characteristics with fatigue. This can be explained by the Effort-Recovery model which states that strain-effects that have built up in the work domain spill over to the home domain and hamper one's functioning and recovery in that situation resulting in fatigue and reduced psychological health.

One important limitation of research in the area of work-home interference, is its almost exclusive focus on the work situation and on the psychological health of the worker him/herself. However, it is likely to assume that job-related stressors also affect the partner's health and well-being. This so-called, 'crossover' or 'transmission', is the major focus of the current study. We assume that crossover may take place through two mechanisms. Firstly, job stressors (e.g. work pressure) of the worker can directly affect fatigue levels of one's spouse (e.g. because the spouse has to 'take over' extra duties). Secondly, job stressors can indirectly affect fatigue levels of one's spouse, via the worker's own strain reactions (e.g. the spouse 'takes over' the worries of the partner). While the limited number of studies that have examined crossover processes investigated the effects of men's work on women's health, the current study attempts to illuminate bi-directional effects in working couples. The central research question, therefore, is: What is the impact of a stressful job and strain reactions of one partner on fatigue of the other partner, as well as the other way around? The results show support for both hypothesized crossover mechanisms

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