

552 **THE IMPACT OF FAMILY-WORK IMBALANCE ON SELF-PERCEIVED HEALTH: MODIFYING EFFECT OF SOCIAL SUPPORT**

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Introduction Work and family imbalance is an important determinant of worker's health. The research on the effects of multiple roles on health in developing countries is scarce. The aim of this study was to investigate the effect of work-family imbalance on self-perceived health (SPH) and to assess the modifying effect of job insecurity (JI), social support at home (SSH), and at work (SSW).

Methods This is a population-based cross-sectional study. The study sample was randomly derived from employed individuals aged 30–64 who participated in 'Balcova Heart Project'. 191 men and 216 women were included in the analyses. Dependent variable was SPH and main independent variables were work-family conflict (WFC), and family-work conflict (FWC). JI, SSH and SSW were considered as possible effect modifiers. Mainly logistic regression models were used.

Results Mean age was 41.9 ± 6.3 and 39.4 ± 6.3 for men and women. Women were more likely to work in white-collar jobs, more educated and have better economic status perception than men. FWC and WFC were independently associated with increased odds of poor SPH [age adjusted odds ratios (OR)=2.92 (1.47–5.78), and 2.38 (95% CI: 1.22 to 4.67) respectively] for women, but there was no significant association for men. In advanced analyses, both SSW and SSH were found to be effect modifiers of the association between FWC and SPH in women ($p < 0.001$). However, the significant association of WFC with SPH disappeared after the adjustment with SSW, therefore, SSW considered to be a confounder for the associations of WFC. Only the association between JI and SPH was significant [odds ratio (OR)=2.52 (1.22–5.21)] in men.

Discussion Both FWC and WFC are important determinants of worker's psychosocial health. Further studies should explore effective population prevention strategies to diminish FWC and WFC, especially in women in developing countries.

578 **INDEPENDENT RELATIONS OF PHYSICAL DEMANDS AND PSYCHOSOCIAL JOB RESOURCES WITH MUSCULOSKELETAL COMPLAINTS: A LONGITUDINAL STUDY**

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Introduction Academic research has elaborated the impact of physical demands (PD) on musculoskeletal health for employees in physically demanding jobs. Studies investigating musculoskeletal complaints (MSC) are mainly cross-sectional, which is a limitation to draw conclusions on causality. In addition

the role of psychosocial factors on the work floor for health is receiving more attention from different studies. This study was designed to examine longitudinally whether psychosocial job resources (job autonomy and social support) and physically demanding activities at work have independent effects on MSC 12 months later.

Methods Results were based on a study including employees from a technology company in Belgium. For 457 persons full information (baseline and at one year follow-up) was available. The exposure measurements used in the study (PD and psychosocial job resources) were obtained from 'the work design questionnaire'. A four-item scale concerning MSC in the previous six months was applied. Multiple linear regression analyses were conducted.

Result Participants were between 22 and 67 years old (mean age was 48.8 years; SD 10.3). Men were highly represented (92.6% men) and 54.9% of the sample had a lower educational background. The independent relations of PD and psychosocial factors were tested in the final model after adjusting for gender, age, language, educational level and baseline MSC. Regression analyses indicated that PD were associated with greater MSC, 12 months later. Only work method autonomy had a negative effect on MSC. Social support, work decision autonomy and work scheduling autonomy had no significant effect.

Discussion The first conclusion of the study was the confirmation of a positive relation between PD at work and MSC over time. The second conclusion was the independent negative effect of work method autonomy on MSC. The main strength of the study was its longitudinal design. A possible limitation was the underrepresentation of women.

589 **OCCUPATIONAL EXPOSURES AND PSYCHOLOGICAL SYMPTOMS AMONG FIRE FIGHTERS AND POLICE DURING A MAJOR WILDFIRE: THE CARMEL COHORT STUDY**

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Introduction The Carmel fire resulted in the death of 45 rescue workers. Little research exists on the health risks to emergency responders during forest fires and the immediate and long term psychological impact from occupational stressors. There is no prospective cohort studying the long term mental health effects among first responders.

Methods A retrospective exposure assessment was performed on 300 first responders, assessing personalised exposure to occupational stressors such as severe lack of sleep, fear for personal safety, and witnessing death of other rescue workers. Frequency of psychological symptoms and mental health diagnoses were assessed among the cohort prospectively over a three year period. Unpaired two sample t-test compared mean exposures and symptom frequency for firefighters and police separately and together. Chi-square estimates of Odds Ratio and 95% CI are provided for odds mental health outcomes