

New evidence for workplace innovation and health

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Workplace innovation claims simultaneous improvement of organisational performance and job quality. This claim is grounded in theories as well as empirical research over more than 40 years. However organisations, working conditions and occupational health services are changing, so fresh evidence is always welcome. This year the renowned *Scandinavian Journal of Work, Environment and Health* published new evidence on the relationship between job strain, low job control and low support on the one hand, and mental disorder, cardiovascular disease and mortality on the other. One of the studies confirms again that lack of autonomy is an independent predictor, not being influenced by general perceptions of control in life.

Niedhammer et al. (2020) explore potential associations between the psychosocial work exposures of the job strain model with cardiovascular mortality, including mortality for ischemic heart diseases (IHD) and stroke in the French working population. The study was based on a cohort of 798 547 men and 697 785 women, for which job history data from 1976 to 2002 were linked to mortality data and causes of death from the national registry.

Within the 1976–2002 period, there were 19 264 cardiovascular deaths among men and 6181 among women. Low decision latitude, low social support, job strain, iso-strain (combination of job strain and low support), passive job, and high strain were associated with cardiovascular mortality. Most of these associations were also observed for IHD and stroke mortality. The comparison between the different exposure measures suggested that current exposure may be more important than cumulative (or past) exposure. The population fractions of cardiovascular mortality attributable to job strain were 5.64% for men and 6.44% for women. The estimated burden of cardiovascular mortality associated with these exposures underlines the need for preventive policies oriented toward the psychosocial work environment.

Regulies et al. (2020) examined the association between job strain and incident coronary heart disease (CHD) in Denmark, while accounting for changes in job strain. They included all employees residing in Denmark in 2000, aged 30–59 years with no prevalent CHD (N=1 660 150). They determined exposure to job strain from 1996–2009 using a job exposure matrix (JEM) with annual updates. Follow-up for incident CHD was from 2001–2010 via linkage to health records.

During 16.1 million person-years, the researchers identified 24 159 incidents of CHD (15.0 per 10 000 person-years). After adjustment for covariates, job strain in 2000 incidents predicted the onset of CHD during a mean follow-up of 9.71 years. When analysing changes in job strain from one year to the next and CHD in the subsequent year, persistent job strain, onset of job strain and removal of strain were associated with higher CHD incidence compared to persistent no job strain. Associations were similar among men and women.

The conclusion is that job strain is associated with a higher risk of incident CHD in Denmark. Reporting bias could be ruled out. However, under- or overestimation of associations is possible due to non-differential misclassification of job strain and residual confounding by socioeconomic position.

Australian researchers Taouk et al. (2020) undertook a systematic review and meta-analysis of research into psychosocial work stressors and risk of all-cause and coronary heart disease mortality. Thirty-two cohort studies were included.

The conclusions are that, after eliminating all possible confounders, workers with low job control have a 3 percent increased risk of all-cause mortality and a 19 percent increased risk of CHD mortality

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compared to workers with high job control. Policy and practice interventions to improve job control could contribute to reductions in all-cause and CHD mortality.

An Australian study by Too et al. (2020) sought to examine the influence of general perceptions of control on the association between job control and mental health. They used four waves of data from a cohort of mid-aged adults from the Personality and Total Health (PATH) Through Life Study (baseline N=2106). Key measures included job control and likelihood of experiencing a common mental disorder (anxiety and/or depression).

The results show that the effect of job control remained significant after adjusting for general perceptions of control and other confounders. The within-person effect in the model demonstrated that, when workers had low job control, they were twice as likely to experience a common mental disorder. Individuals' general perceptions of control in life does not account for the association between low job control and poor mental health. The findings add a new layer of evidence to the literature demonstrating that lack of autonomy at work is an independent predictor of employees' mental health. Increasing employee control should be integrated into workplace strategies to promote mental health.

Preventive policies and practices

As the researchers say, there is a need for preventive policies oriented toward the psychosocial work environment. Policy and practice interventions to improve job control could contribute to reductions in all-cause and CHD mortality. Increasing employee control should be integrated into workplace strategies to promote mental health.

Looking at European and national policies, many recommendations exist to design work organisation and technology in such a way that individual workers have a balance between job demands and job control as well as social support by colleagues and supervisor. A good example at European level is the 'European framework for psychosocial risk management' (PRIMA-EF). To include these recommendations in legislation proves to be more difficult. The debate whether there should be a European Directive on psychosocial risks is going on for decades. The good news is that there is a draft international standard 'Psychological health and safety at the workplace' (ISO/DIS 45003) available for public consultation in which job control and social support are included.

But ultimately organisations have to apply it and luckily an increasing number of them do so. Job control and social support are core elements of workplace innovation. More information and tools can be found at Workitects (<https://www.workitects.be/>) and Workplace Innovation Europe CLG (<https://workplaceinnovation.eu/>).

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