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Work and mental health: what do we know and how can we intervene?

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Work and mental health: what do we know and how can we intervene?

As working conditions are increasingly characterized by socio-emotional demands, interpersonal interactions and relationships, and mental requirements, at least in high-income, post-industrialized societies, work and mental health has evolved as a key topic of occupational health research (1, 2).

In this editorial, we focus on three main themes within this topic: (i) identifying factors at work that contribute to the onset of mental health problems and clinical mental disorders; (ii) using work as a “therapeutic tool” for individuals with mental health problems; and (iii) conducting and evaluating intervention studies.

Regarding the first theme, one of the earliest systematic reviews on work-related risk factors of common mental disorders was published in 2006 by Stansfeld & Candy in this journal (3), an article that today is a “citation classic” (876 citations in Web of Science as of 6 October 2019). The authors identified job strain and effort–reward imbalance as risk factors, while acknowledging that only few studies of high quality were available (3). Today, more high quality studies are available and recent meta-analyses reported that job strain (4) and effort–reward imbalance (5) predict incident depressive disorders, corroborating the conclusion of the pioneering 2006 review. Other reviews suggest that also low job control (6), workplace bullying (6), and job insecurity (7) may be involved in the etiology of depressive disorders. Long working hours are also discussed, however, a recent review reported that associations between long working hours and depressive symptoms were relatively small and differed between world regions (8). Currently, the World Health Organization (WHO) and the International Labour Organization (ILO) are working on parameters for estimating the global burden of depressive disorders attributable to long working hours (9).

Despite this progress in research, important challenges remain, for example the overreliance on traditional cohort studies with one baseline and one follow-up measure only, and on self-reported measures of working conditions that may be affected by undetected prevalent mental health problems (10). Recent studies, using multiple exposure measures with fixed-effects analyses (11) or job exposure matrices (12) have started to address these challenges. Further, more research is needed on mental disorders other than depressive disorders, such as anxiety or adjustment disorders (10).

Regarding the second theme – work as a therapeutic tool – a key publication was the report by Dame Carol Black for the British Government in 2008 on “Working for a healthier tomorrow” (13).¹ The report argued that “work which is appropriate to an individual’s knowledge, skills and circumstances, and undertaken in a safe, healthy and supportive working environment, promotes good physical and mental health, helps to prevent ill-health and can play an active part in helping people recover from illness” (13, p67). Results from observational studies have confirmed the association between employment and better mental health (15), however, it remains unclear if being employed and re-employed influences mental health, or if better mental health increases chances for work retention and re-employment. A recent review on re-employment programs reported “some indications that re-employment programmes [...] had a positive effect on quality of life” but found “no evidence for benefits concerning mental health and functioning”, thus questioning the results from the observational studies (16). In an attempt to disentangle selection and causation, Schuring et al (17) used a combination of fixed and random effects models to analyze observational data on re-employment of Dutch residents diagnosed with a mental disorder. The results indicated both selection and causation effects, with the reservations that only a small fraction of the study participants actually returned to work (8%) and that confounding by time-varying confounders could not be ruled out (17).

¹ In the literature, the report is often referred to as the “Black report”, which is confusing, as the groundbreaking documentation of social inequalities in health in the United Kingdom, published in 1980 from a research working group chaired by Sir Douglas Black, is traditionally known as the “Black report” (14).

Regarding the third theme – intervention studies aiming to protect and enhance workers' mental health – little is known about the key for success. It is therefore welcomed that in this issue of the *Scandinavian Journal of Work, Environment and Health*, three reviews either solely or partly focus on this topic.

Phillips and colleagues identified 50 randomized controlled trials using e-mental health interventions, including 34 of those in meta-analyses (18). The interventions focused on making changes in the individual, with about two-thirds based on cognitive behavioral therapy. The authors reported "moderate effects on stress, insomnia and burnout and small treatment effects on depression, anxiety, well-being, and mindfulness".

Bordado Sköld and colleagues conducted a systematic review on the effect of exercise interventions at work on either psychosocial working conditions or workers' mental health (19). The 22 included studies showed large heterogeneity in terms of study design, populations, interventions and outcome measures. Consequently, the authors did not calculate pooled estimates but performed a qualitative synthesis. Some studies reported improvements in mental health scores in the intervention groups, other studies did not find any effects. Overall, the results did not provide support for the hypothesis that workplace exercise programs may be beneficial for workers' mental health. There was also no convincing effect on psychosocial working conditions.

Proper & van Oostrom conducted a "meta-review" (a systematic review of previously published reviews) on the effect of workplace health promotion interventions on metabolic risk factors and musculoskeletal and mental health (20). They identified 23 reviews, including 9 of high quality. There was strong evidence for an effect of workplace health promotion programs on weight-related outcomes and the prevention of musculoskeletal disorders. Regarding mental health, Proper & van Oostrom identified 6 reviews, 4 of low and 2 of high quality. The interventions included e-mental health interventions, cognitive behavior therapy, stress management, psycho-education and physical activity. The authors conclude that there was strong evidence that e-mental health and cognitive behavior techniques had a positive effect on workers' mental health, whereas the evidence for intervention on physical activity was less clear, echoing the conclusions by Phillips et al (18) and Bordado Sköld et al (19).

What do we learn from these three reviews? First, interventions based on cognitive behavior therapy, including e-mental health interventions, seem to be an effective tool for protecting and enhancing workers' mental health (18, 20). However, as Phillips et al noted (18), more than two-thirds of the participants in e-mental health studies were highly educated (having at least some years of university education), and jobs in knowledge-intensive occupational sectors, such as information technology, were overrepresented. Considering that mental disorders are more prevalent in individuals of lower socioeconomic position (21–23), one may be concerned that e-mental health interventions do not reach those who need help most. Further, it remains unclear if e-mental health interventions are as effective for workers with low education as they seem to be for workers with high education.

Second, exercise programs at work sometimes seem to have a positive effect on mental health and other times not (19, 20), thus, no clear conclusion can be drawn. The reason for these inconsistent results are unknown as exploring these reasons was beyond the scope of the reviews (19, 20).

Third, the interventions did not aim to change the work environment but rather the individual worker. In the review by Bordado Sköld (19) this was a given as the review was about exercise programs. But e-mental health interventions could have been about guidance for changing working conditions and workplace health promotion does not have to be limited to health behaviors and cognitive changes but could also target the work environment, as it has been proposed in the concepts of "Comprehensive Health Promotion" (24) and "Total Worker Health™" (25). However, these type of interventions did not seem to have qualified for the review on e-mental health (18) or the meta-review on workplace health promotion (20).

A recent meta-review on "workplace interventions for common mental disorders" (26) identified – in agreement with the meta-review by Proper & van Oostrom (20) – cognitive behavioral therapy-based stress management as the intervention with the strongest evidence for a positive effect on workers' mental health. The only effective intervention regarding working conditions and mental health identified in this review were interventions to increase worker control (eg, self-scheduling of shifts and gradual/partial retirement) (26). However, the evidence was weaker than for cognitive behavioral therapy.

Considering the above-delineated evidence for an association between adverse working conditions and the risk of developing mental disorders (3–12) and the ongoing discussion about using work matched to one's "knowledge, skills and circumstances, and undertaken in a safe, healthy and supportive working environment" (13) as a therapeutic tool for individuals with prevalent mental health problems and disorders (13, 15–17), it is disconcerting that organizational-level, work environment interventions to protect or enhance workers' mental health seem either not to qualify for systematic reviews (18, 20) or, if they do, show rather weak or inconsistent results (26, 27).

One reason why organizational-level interventions have not shown convincing effects regarding workers' mental health may be that these type of interventions are highly dependent on the context in which they are implemented in (28, 29). Consequently, researchers in this field have argued for no longer only asking "What works?", but instead "What works, for whom, under what circumstances, and how?" (30, 31). It can be regarded as a sign of scientific progress that this question is now increasingly being posed, indicating the retreat of the idea that workplace organizational interventions can be evaluated in a similar way to those of clinical trials testing the efficaciousness of a new drug (32–34). However, the real progress that still needs to be made would be to find answers to the question "What works, for whom, under what circumstances, and how?", to report these answers in research articles, and finally to summarize these results in new types of systematic reviews and meta-analyses (35). Occupational mental health research has quite some way to go until we reach this stage.

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