



Editorial comment

Is musculoskeletal pain associated with work engagement?



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In this issue of the *Scandinavian Journal of Pain* Kirsi Malmberg-Ceder and co-workers from Helsinki, Turku, Kuopio, and Pori in Finland publish their cross-sectional study on possible factors associated with lower work-engagement, such as burden of pain and several psychosocial issues [1]. An apparent statistically highly significant association between medium and severe burden of pain and work-engagement became less impressive after multivariate ordered logistic regression analyses. Still, duration of sick-leave due to musculoskeletal pain did lower work-engagement significantly. They concluded that psychosocial and life-style factors significantly correlated with work-engagement. Uncomplicated pain per se did not have this effect [1].

1. How disabling a pain condition becomes is determined by many add-on factors, in addition to the pain per se

Work, health, and work ability should be discussed within a *bio-psycho-social framework* since biological/medical, psychological, and social factors contribute to health and function. Retirement due to disability is a result of a series of processes. Medical condition, physiological and psychological function, competence, job characteristics, individual appraisal of work ability, physician's assessment of work ability, job motivation, availability of alternative work tasks, legislation, economical incentives, macro-economic conditions, may contribute in the processes leading from good health and high work ability to disability and exit from working life.

In Norway the presence of chronic pain increases the risk of early retirement by a factor of more than 4 [2,3], increasing age and the presence of anxiety and depression contribute significantly, but not by far as much as chronic pain to the risk of early disability retirement [2,3].

2. Factors at the workplace

Work factors may contribute to early retirement with disability by influencing several of these factors. Many studies have shown that psychological, social, and organizational factors at work contribute to health in general and to musculoskeletal pain disorders in

particular (e.g. [4]). While health and pain may influence function and the ability to perform work tasks, the individuals' subjective appraisal of the cause(s), threat, and consequences of a health problem may influence illness perceptions and illness behaviours. In combination with the appraisal of demands posed by the work tasks, illness perceptions and behaviours may influence the individuals' appraisal of work ability.

Hence, factors pertaining to *individual-, workplace-, and society-levels* may contribute to work disability. Examples of individual-level psychological factors that seem to contribute to the prognosis of chronic musculoskeletal pain and disability are fear avoidance (e.g. [5,6]) and catastrophizing pain beliefs (e.g. [7]).

3. Work motivation, loyalty and responsibility at work

Work motivation may moderate effects of health on work ability. Motives and expectations need to be satisfied for employees to perceive the job as satisfactory and motivating. Several decades of studies of management and organizational psychology have delineated attitudes that contribute to job satisfaction and sickness absence: Job involvement is the individual's identification with the job, i.e. the attitude that one's work activities are important to his or her identity or self-image (e.g. [8]). Commitment to the workplace is the identification with, loyalty to, and engagement in the employing organization (e.g. [9]). Several factors that determine work motivation have also been documented (e.g. [10,11]).

4. Work engagement and perception of pain

Work engagement is a recent popular construct to describe *positive states related to work*. This construct is a compound of factors related to motivation: "vigour, dedication, absorption" [12]. It seems possible that having pain may influence one's perception of work tasks and psychological states related to work.

The study that Kirsi Malmberg-Ceder and co-workers publish in the present issue of *Scandinavian Journal of Pain* aimed to determine if female employees with or without musculoskeletal pain report different levels of work engagement. Of the 702 employees examined, 465 (77%) reported pain lasting for more than three months and 101 reported no pain at all [1].

This study found that the musculoskeletal pain per se was not related to self-reported work engagement. Factors pertaining to personal economy (financial satisfaction), psychological state and

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traits (depression, anxiety, sleep quality, hostility, type D personality), leisure time physical activity, and “work and family stress” were all related to self-reported job engagement in this cross-sectional study [1].

With the cross-sectional design and all variables measured by subjective reports there is no way to draw conclusions of the nature of associations between these variables and work engagement, i.e. the direction of any causation cannot be determined.

5. Implications of the study by Kirsi Malmberg-Ceder and co-workers

Their study illustrates the need for knowledge of interactions between pain and health, job motivation, competence, and work ability [1]. Future studies should have full-panel prospective designs and incorporate adequate measurement of work factors to allow evidence-based conclusions of risks, prognosis, and should enable researchers to propose hypothesis of mechanisms. Furthermore, the “classical” factors of job motivation, involvement, and commitment should be taken into consideration in studies of pain-related risk of disability and well-being at work.

Conflict of interest

None declared.

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