



Workplace risk management practices to prevent musculoskeletal and mental health disorders: What are the gaps?



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ABSTRACT

Introduction: A large body of evidence demonstrates substantial effects of work-related psychosocial hazards on risks of both musculoskeletal and mental health disorders (MSDs and MHDs), which are two of the most costly occupational health problems in many countries. This study investigated current workplace risk management practices in two industry sectors with high risk of both MSDs and MHDs and evaluated the extent to which risk from psychosocial hazards is being effectively managed.

Method: Nineteen, mostly large, Australian organisations were each asked to provide documentation of their relevant policies and procedures, and semi-structured interviews were conducted with 67 staff who had OHS or management roles within these organisations. Information about current workplace practices was derived from analyses of both the documentation and interview transcripts.

Results: Risk management practices addressing musculoskeletal and mental health risks in these workplaces focused predominately on changing individual behaviours through workplace training, provision of information, individual counselling, and sometimes healthy lifestyle programs. There were formal procedures to control sources of risk for workplace biomechanical hazards affecting musculoskeletal risk, but no corresponding procedures to control risk from work-related psychosocial hazards. Very few risk control actions addressed risk from psychosocial hazards at their workplace sources.

Practical applications: To reduce the risk of both musculoskeletal and mental health disorders, existing practices need considerable expansion to address risk from all potential psychosocial hazards. Risk controls for both biomechanical and psychosocial hazards need to focus more on eliminating or reducing risk at source, in accord with the general risk management hierarchy.

1. Introduction

Over recent decades ‘psychosocial risk’ has become a familiar term within the occupational health management domain (European Agency for Safety and Health at Work, 2007; Jain et al., 2011). This term refers to health risks arising from work-related ‘psychosocial hazards’, which have been defined as “aspects of the design and management of work and its social and organisational contexts that have the potential for causing psychological or physical harm” (Leka and Cox, 2008) p. 1. It is well established that in the causal mechanism linking psychosocial hazards to workers’ health, ‘stress’ plays a key role (Chandola et al., 2008; Cox, 1978; Karasek and Theorell, 1990; Kim and Kang, 2010; Kompier, 2003; Kompier and Van der Beek, 2008; Macdonald, 2012;

Macdonald and Evans, 2006; Marmot et al., 1999).

Two of the most prevalent and costly of the occupational health problems influenced by psychosocial hazards are musculoskeletal and mental health disorders (MSDs and MHDs). In Australia, for example, musculoskeletal injuries and disorders are by far the most prevalent type of work-related injury or illness, with mental disorders being the second most prevalent (Safe Work Australia, 2015). Quantitative international comparisons are hindered by wide variation in definitions and data recording systems, but prevalence levels are similarly high in most industrially developed countries (e.g. Montano, 2014)

Various guidance documents have been developed to help workplaces manage health risks from psychosocial hazards and associated stress, but this guidance has a strong focus on risk of *mental* health

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disorders (British Standards Institute, 2011; Canadian Standards Association, 2013; Health and Safety Executive, 2012; International Labour Office, 2012; Safe Work Australia, 2014). This is probably helpful in workplaces where mental health is the main concern, since psychosocial hazards are the main ones affecting such risk.

However, there is a large body of evidence that psychosocial hazards can also have substantial effects on workers' physical health, including risk of musculoskeletal disorders (MSDs) (Eatough et al., 2012; Gerr et al., 2014; Kompier and Van der Beek, 2008; Lang et al., 2012; Macdonald and Evans, 2006; National Research Council (US) & Institute of Medicine (US) Panel on Musculoskeletal disorders and the workplace, 2001). In workplaces where MSDs are the main OHS problem, the focus of stress-related guidance material on mental health is likely to present a barrier to more effective MSD risk management (Macdonald and Oakman, 2015), and this problem is exacerbated by current MSD risk management guidance. The best of this guidance includes mention of psychosocial hazards, but relatively little information is included about how to assess and control associated risks; for example see reviews by Macdonald et al. (2003), Macdonald and Evans (2006) and online guidance of the UK Health and Safety Executive (2012), SafeWork Australia (2016a), and the Occupational Health & Safety Council of Ontario (2013).

The ergonomics systems model shown in Fig. 1 represents the large and diverse range of factors known to influence MSD and MHD risk. It shows two groups of factors that are largely beyond the control of workplace managers. First, *Workers' Personal Characteristics*, which are the unique physical and psychological strengths and weaknesses that people bring with them to work, including vulnerabilities arising from fatigue or stress due to inadequate sleep, non-work personal responsibilities and problems, pre-existing injuries or health problems and so on. Second, *External Factors* include: OHS regulatory enforcement practices; injury compensation legislation and practices; state of the job market, pay levels and other economic factors; general societal norms concerning absenteeism and a 'fair day's work'; and of course OHS legislation and associated codes, regulatory standards and related guidance information. In the Australian jurisdiction where the current research was conducted, legislation requires 'duty holders' to protect against risk to workers' health and safety. It defines 'health' to include both psychological and physical, and specifies that employers' responsibilities include provision and maintenance of working environments, plant and 'systems of work' that are "safe and without risks to health"

(Occupational Health and Safety Act 2004, Victoria).

As shown in Fig. 1, workers interact with and are affected by the following sets of workplace factors for which their managers have primary responsibility.

- **Task & Equipment Factors:** characteristics of specific work tasks and the tools or equipment used in performing these tasks. These include the physical hazards associated with 'manual handling' tasks, which are widely recognised as affecting MSD risk. They also include some psychosocial hazards, such as bus drivers' stressful encounters with difficult passengers, or nurses' struggles to manage verbally abusive or distressed patients. In such cases it is often possible to mitigate risk by changes to task equipment, the immediate work space, and/or design of the particular task.
- **Work Organisation and Job Design Factors:** how work is organised and jobs designed. These factors include very long working hours, pressure to complete excessively large amounts of work in the time available, inadequate rest breaks, night shifts, jobs with low control over work rate (e.g. due to a moving assembly line, frequent deadlines), little variety or interest, few opportunities to use existing skills or develop new ones, little opportunity to interact with others, inadequate support from supervisors or colleagues, low rewards (not only financial) in relation to personal effort invested, etc.
- **Workplace Environment Factors:** both physical and psychosocial. Physical environment factors include air quality, extreme heat or cold, loud noise. The psychosocial environment includes factors arising from the general workplace culture or climate, such as widespread perceptions that getting work done quickly is more important than workers' health and safety, low job security, autocratic style of management with minimal participation by employees at lower levels, and so on.

It can be seen that the 'psychosocial' hazards for which managers have primary responsibility occur among all three of the above types of workplace factors. They include all work organisation, job design and psychosocial environment factors as well as some that are inherent in task performance. The great diversity of these hazards presents a major challenge to OHS risk managers because direct responsibility for them is widespread among various personnel, many of whom have general supervisory or management responsibilities but no specific OHS expertise. And although guidance for workplaces on managing health risks from occupational stress and associated psychosocial hazards is available, there is little information on the nature of actual workplace practices (Natali et al., 2008; European Agency for Safety and Health at Work, 2010; Langenhan et al., 2013). Similarly, there is extensive guidance on MSD risk management, albeit with inadequate coverage of risk from psychosocial hazards, but the nature and quality of actual workplace MSD risk management practices is very poorly documented (Macdonald et al., 2008; Oakman, 2014; Whysall et al., 2004).

Two basic requirements are needed for effective workplace management of occupational health problems that have multiple potential causes, such as MSDs and MHDs. The first is that risk from all potentially important hazards must be taken into account. Macdonald and Oakman (2015) argued that currently this is unlikely to be the case for MSD risk because risk from psychosocial hazards is unlikely to be addressed adequately.

The second requirement is that the risk control actions must be as high within the general hierarchy of risk control as is reasonably practicable (ILO-OSH, 2001). According to this hierarchy, highest priority must be given to actions that eliminate or at least reduce the severity of a hazard, since this kind of action is most reliably effective. This general principle is reflected also in EU Directive 89/391/EEC, Article 6 'General obligations on employers' (EU, 1989), where 6–2 specifies some 'general principles of prevention' of which the first three are "(a) avoiding risks; (b) evaluating the risks which cannot be avoided; (c) combating the risks at source;". For example, training

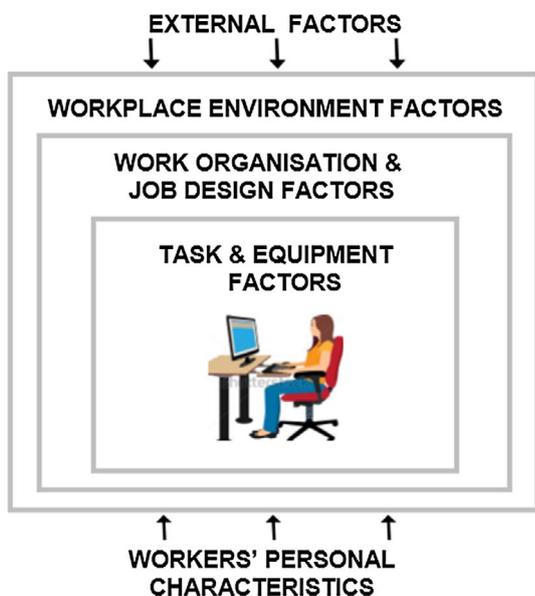


Fig. 1. The system of workplace factors affecting workers' health, safety and performance. (Adapted from Macdonald et al., 2003, Fig. 1.)

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