Requirements for more effective workplace risk management of musculoskeletal disorders

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1. Abstract

Some requirements for more effective workplace management of the risk of musculoskeletal disorders (MSDs) are identified, based on evidence of: hazards affecting MSD risk; effectiveness of workplace interventions; and barriers to more effective management including regulatory and guidance documents, ‘ergonomics’ MSD risk assessment methods, and OHS risk management paradigms. Implications for improved workplace management of MSD risk are outlined.

2. Summary

2.1 Purpose

This presentation identifies some key requirements for more effective workplace management of the risk of musculoskeletal disorders (MSDs).

2.2 Method

Analysis and synthesis of evidence from academic research and ‘grey literature’ on the following:

- the diverse range of both physical and psychosocial work-related hazards affecting MSD risk, and characteristics of effective workplace interventions to reduce MSD risk;
- barriers to more effective risk management, including:
  - content of MSD-related risk management standards and guidance documents;
  - MSD risk assessment methods developed by ergonomists; and
  - generic OHS risk management paradigms.

2.3 Findings

Workers’ MSD risk is undoubtedly influenced by performance of hazardous manual tasks, but there is now incontrovertible evidence that psychosocial hazards can also have a very substantial effect on risk level (Eatough et al, 2012; Oakman et al, 2014). Further, many MSD hazards are additive or interact (Marras et al, 2009), which threatens the validity of MSD risk assessments based on only one type or subset of hazards. Such evidence is not yet reflected in MSD risk management practices in most workplaces (Whysall et al, 2004). This situation is unsurprising, given the inadequate coverage of psychosocial hazards and associated control strategies in most MSD risk management guidance documents (Macdonald et al, 2003), and the focus of ‘ergonomics’ risk assessment tools on physical hazards associated with particular manual handling tasks (Macdonald & Evans, 2006). Within the OHS domain there is increasing awareness of the need to manage risk from psychosocial hazards, but this need is widely seen as relevant primarily to mental health disorders, despite strong evidence of the importance of psychosocial hazards for physical health disorders such as MSDs.

Another barrier to more effective MSD risk management is the general OHS risk management paradigm, which focuses on procedures to manage risk from a particular type of hazard, rather than on procedures to manage all sources of risk for a particular type of harmful outcome such as MSDs. For example, Australia has a national Code of Practice for Hazardous Manual Tasks rather than for Prevention of Musculoskeletal Disorders. This hazard-focused paradigm is adequate for risks such as noise-induced hearing loss, or skin disorders arising from chemical exposures, where there is a relatively simple causal pathway between a particular hazard (e.g. loud noise) and the harmful outcome (e.g. hearing loss). However, when there are multiple hazards and complex causal pathways between these hazards and the harmful outcome – as is the case with MSDs – there is a need for a more holistic, system-based risk management framework, consistent with the IEA definition of ergonomics (International Ergonomics Association website).
Based on the above evidence and rationale, a toolkit intended for routine workplace use in MSD risk management has been drafted (Macdonald, 2012; Macdonald & Oakman, 2013). The structure and content of this toolkit will be presented for critical review in a separate Workshop.

3. References


