

What Do Researchers Really Think About Work Risk Factors and MSDs?

Scientists who investigate work-related musculoskeletal disorders (MSDs) often express their peer-reviewed published research conclusions and opinions in nebulous terms despite their study's discovery of strong relationships between work risk factors and MSDs.

Further, in informal communications, published authors tend to opine in more concrete verbiage and support of the connection between risk factors and MSDs.

This dichotomy, revealed by Canadian researchers in a recent study, presents a confusing picture to legal bodies such as workers' compensation boards and legislative hearings. The benefits of injured workers and quality of safety regulations become compromised.

Study Design

The authors compared the findings and opinions expressed by occupational health professionals in formal written papers and in informal communications.

Formal Communications

Twenty articles published between 1998 and 2004 from two journals (10 each from the *American Journal of Industrial Medicine* and the *Journal of Occupational and Environmental Medicine*) were identified. To be included, a study needed to:

- Assess a causal relationship through an etiological inference between an exposure and a health outcome in working populations
- Consider work or work-related factors as an exposure and musculoskeletal disorders as the health outcome

The associations of study findings were evaluated through four indicators and based on strength of association, consistency, temporality, and coherence of evidence. Each article was read by two investigators.

Informal Communications

From archived messages of the Occ-Env-Med-L (an online discussion forum composed mostly of physicians who primarily work in occupational and environmental medicine), a search was conducted involving messages written between 1994 and 2002. Key words used were "repetitive", "RSI", "cumulative", "CTD", "musculoskeletal", "MSD", or "upper extremity".

From 1,138 messages, 83 written by 42 professionals met the inclusion criteria of:

- Expressed views on MSDs
- Presented an opinion regarding work-relatedness

- Were not written by the forum administrator
- Were written by an individual who had published a peer-reviewed article

A contributor's opinion regarding causation between a risk factor and MSDs was classified as "yes/maybe/no".

Other Findings

An experienced investigator felt that most of the 20 studies found a positive causal relationship between work risk factors and MSDs. Further, 19 of the papers reported a statistically significant finding between a work risk factor and MSDs. However, nearly all studies failed to state the finding in the title (19 out of 20) and the abstract was equally uninformative (16 out of 20 with no description).

From the informal communications:

- 75 percent accepted that there was a relationship between work and MSDs
- 21 percent professed an undecided view
- 4 percent did not accept that there was a relationship between work and MSDs

Also from the informal communications:

- 50 percent of those with an undecided or negative outlook regarding work/MSDs worked in hospitals, clinics or private practice
- 100 percent of those who felt there was a positive relationship between work/MSDs worked as academics

Study Concern/Limitations

The authors noted the following limitations in this paper:

- The number of articles reviewed was small
- For a variety of reasons, it is difficult to associate work risk factors and MSDs
- This was a US based study; different findings may have been found if the review included other countries

The Bottom Line

It is understood that caution is required when stating a causation link between work factors and MSDs. However, editorial boards should encourage authors to use terms that better describe findings in titles, abstracts, and summaries of published articles.

Article Title: Would a "One-Handed" Scientist Lack Rigor? How Scientists Discuss the Work-Relatedness of Musculoskeletal Disorders in Formal and Informal Communications

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