

IWH Research Alert
February 1, 2019

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***Cote P, Boyle E, Shearer HM, Stupar M, Jacobs C, Cassidy JD, Carette S, van der Velde G, Wong JJ, Hogg-Johnson S, et al. Is a government-regulated rehabilitation guideline more effective than general practitioner education or preferred-provider rehabilitation in promoting recovery from acute whiplash-associated disorders? A pragmatic randomised controlled trial. *BMJ Open*. 2019; 9(1):e021283.**

<https://doi.org/10.1136/bmjopen-2017-021283> [open access]

Abstract: **OBJECTIVE:** To evaluate the effectiveness of a government-regulated rehabilitation guideline compared with education and activation by general practitioners, and to a preferred-provider insurance-based rehabilitation programme on self-reported global recovery from acute whiplash-associated disorders (WAD) grade I-II. **DESIGN:** Pragmatic randomised clinical trial with blinded outcome assessment. **SETTING:** Multidisciplinary rehabilitation clinics and general practitioners in Ontario, Canada. **PARTICIPANTS:** 340 participants with acute WAD grade I and II. Potential participants were sampled from a large automobile insurer when reporting a traffic injury. **INTERVENTIONS:** Participants were randomised to receive one of three protocols: government-regulated rehabilitation guideline, education and activation by general practitioners or a preferred-provider insurance-based rehabilitation. **PRIMARY AND SECONDARY OUTCOME MEASURES:** Our primary outcome was time to self-reported global recovery. Secondary outcomes included time on insurance benefits, neck pain intensity, whiplash-related disability, health-related quality of life and depressive symptomatology at 6 weeks and 3, 6, 9 and 12 months postinjury. **RESULTS:** The median time to self-reported global recovery was 59 days (95% CI 55 to 68) for the government-regulated guideline group, 105 days (95% CI 61 to 126) for the preferred-provider group and 108 days (95% CI 93 to 206) for the general

practitioner group; the difference was not statistically significant ($\chi^2=3.96$; 2 df: $p=0.138$). We found no clinically important differences between groups in secondary outcomes. Post hoc analysis suggests that the general practitioner (hazard rate ratio (HRR)=0.51, 95% CI 0.34 to 0.77) and preferred-provider groups (HRR=0.67, 95% CI 0.46 to 0.96) had slower recovery than the government-regulated guideline group during the first 80 days postinjury. No major adverse events were reported. CONCLUSIONS: Time-to-recovery did not significantly differ across intervention groups. We found no differences between groups with regard to neck-specific outcomes, depression and health-related quality of life. TRIAL REGISTRATION NUMBER: NCT00546806

***Van Eerd D. Knowledge transfer and exchange in health and safety: a rapid review. Policy and Practice in Health and Safety. 2019; [epub ahead of print].**

<https://doi.org/10.1080/14773996.2018.1508116> [open access]

Abstract: Workplace injury and illness can be burdensome for workers and workplaces regardless of jurisdiction. The notion of research to practice is important in health and safety research. The objective of this article is to describe and synthesize the literature describing knowledge transfer and exchange (KTE) approaches relevant to workplaces. A rapid review of the literature was done. Search strategies were run in eight electronic databases. Documents describing a KTE approach for workplaces were reviewed. Data related to key aspects of the KTE approach as well as conceptual guidance were extracted and synthesized. Literature searches revealed 34 documents that described 23 different KTE approaches designed to reach workplace audiences. Many KTE approaches were guided by conceptual frameworks. Common elements related to audience, activities and impact were found to guide future KTE approaches. Including workplace parties as an audience in a multi-faceted approach are important principles of KTE for health and safety

Alasoini T. Nordic working life development programs and the tricky problem of scaling-up. Nordic Journal of Working Life Studies. 2018; 8(4):71-91.

<https://doi.org/10.18291/njwls.v8i4.111929> [open access]

Bakusic J, Lenderink A, Lambreghts C, Vandebroek S, Verbeek J, Curti S, et al. Alert and sentinel approaches for the identification of work-related diseases in the EU. European Risk Observatory report. Bilbao, Spain: European Agency for Safety and Health at Work; 2018.

<https://osha.europa.eu/en/tools-and-publications/publications/alert-and-sentinel-approaches-identification-work-related/view>

Brooks SK, Rubin GJ, and Greenberg N. Traumatic stress within disaster-exposed occupations: overview of the literature and suggestions for the management of traumatic stress in the workplace. British Medical Bulletin. 2018; [epub ahead of print].

<https://doi.org/10.1093/bmb/ldy040>

Abstract: Background: Many people who experience a disaster will do so as part of an occupational group, either by chance or due to the nature of their role. Sources of data: This review is based on literature published in scientific journals. Areas of agreement: There are many social and occupational factors, which affect post-disaster mental health. In particular, effective social support-both during and post-disaster-appears to enhance psychological resilience. Areas of controversy: There is conflicting evidence regarding the best way to support trauma-exposed employees. Many organisations carry out post-incident debriefing despite evidence that this is unhelpful. Growing points: Employees who are well supported tend to have better psychological outcomes and as a result may be more likely to perform well at work. Areas timely for developing research: The development and evaluation of workplace interventions designed to help managers facilitate psychological resilience in their workforce is a priority. Successful interventions could substantially increase resilience and reduce the risk of long-term mental health problems in trauma-exposed employees

Camino Lopez MA, Gonzalez Alcantara OJ, Fontaneda I, and Mananes M. The risk factor of age in construction accidents: important at present and fundamental in the future. BioMed Research International. 2018; 2018:2451313.

<https://doi.org/10.1155/2018/2451313> [open access]

Abstract: Occupational accidents in the construction sector are analyzed in this study of the relation between the age of the injured worker, days off work due to the injury, and accident severity. A further aim is to establish whether accumulated fatigue during the working day and throughout the week has a similar effect on all workers, regardless of age. A total of three million four hundred and thirty-eight thousand, one hundred and forty-five (3,438,145) accidents are analyzed in this study; the total of all accidents are notified in Spain by workers from the sector over the period 1996-2015. The results confirmed a direct link between worker age and both days off work due to the injury and accident severity. They also confirmed that the workers injured in accidents in the afternoon hours were older than the workers injured in the morning hours. In consequence, the average number of days off work due to injury following an accident of the older workers was also larger and the accidents are more severe. Likewise, the workers injured on a Friday were of an older average age than those injured on a Monday. In consequence, the average number of days off work due to injury on the last day of the week was also higher and the accidents were of more severity. All the above-mentioned differences were statistically significant

Gravina NE, King A, and Austin J. Training leaders to apply behavioral concepts to improve safety. Safety Science. 2019; 112:66-70.

<https://doi.org/10.1016/j.ssci.2018.10.013>

Madsen AA. Long-term sickness absence among professionals: investigating gender, socioeconomic position and care work. *Nordic Journal of Working Life Studies*. 2018; 8(4):45-69.

<https://doi.org/10.18291/njwls.v8i4.111928> [open access]

Pollock M, Fernandes RM, Newton AS, Scott SD, and Hartling L. A decision tool to help researchers make decisions about including systematic reviews in overviews of reviews of healthcare interventions. *Systematic Reviews*. 2019; 8(1):29.

<https://doi.org/10.1186/s13643-018-0768-8> [open access]

Abstract: BACKGROUND: Overviews of reviews of healthcare interventions (overviews) integrate information from multiple systematic reviews (SRs) to provide a single synthesis of relevant evidence for decision-making. Overviews may identify multiple SRs that examine the same intervention for the same condition and include some, but not all, of the same primary studies. Different researchers use different approaches to manage these "overlapping SRs," but each approach has advantages and disadvantages. This study aimed to develop an evidence-based decision tool to help researchers make informed inclusion decisions when conducting overviews of healthcare interventions. **METHODS:** We used a two-stage process to develop the decision tool. First, we conducted a multiple case study to obtain empirical evidence upon which the tool is based. We systematically conducted seven overviews five times each, making five different decisions about which SRs to include in the overviews, for a total of 35 overviews; we then examined the impact of the five inclusion decisions on the overviews' comprehensiveness and challenges, within and across the seven overview cases. Second, we used a structured, iterative process to transform the evidence obtained from the multiple case study into an empirically based decision tool with accompanying descriptive text. **RESULTS:** The resulting decision tool contains four questions: (1) Do Cochrane SRs likely examine all relevant intervention comparisons and available data? (2) Do the Cochrane SRs overlap? (3) Do the non-Cochrane SRs overlap? (4) Are researchers prepared and able to avoid double-counting outcome data from overlapping SRs, by ensuring that each primary study's outcome data are extracted from overlapping SRs only once? Guidance is provided to help researchers answer each question, and empirical evidence is provided regarding the advantages, disadvantages, and potential trade-offs of the different inclusion decisions. **CONCLUSIONS:** This evidence-based decision tool is designed to provide researchers with the knowledge and means to make informed inclusion decisions in overviews. The tool can provide practical guidance and support for overview authors by helping them consider questions that could affect the comprehensiveness and complexity of their overviews. We hope this tool will be a useful resource for researchers conducting overviews, and we welcome discussion, testing, and refinement of the proposed tool

Potter R, O'Keeffe V, Leka S, Webber M, and Dollard M. Analytical review of the Australian policy context for work-related psychological health and psychosocial risks. Safety Science. 2019; 111:37-48.

<https://doi.org/10.1016/j.ssci.2018.09.012> [open access]

Purc-Stephenson RJ, Dostie J, and Smith HJ. Swimming against the current: a qualitative review of the work experiences and adaptations made by employees with arthritis. Arthritis Care & Research. 2018; 70(11):1587-1597.

<https://doi.org/10.1002/acr.23528>

Abstract: OBJECTIVE: To describe the experiences and strategies of employees with arthritis to maintain employment, and to use this information to build a conceptual model. METHODS: We conducted a systematic review of qualitative studies that examined the work experiences of employees with arthritis. Published studies on arthritis and employment were searched from electronic databases (1980-2017) and bibliographic reviews of relevant studies. We used meta-ethnography to synthesize the findings. RESULTS: We reviewed 17 studies that reported on the experiences of 873 employees. We identified 11 main themes that highlight common issues experienced by employees with arthritis and grouped these into 4 higher-order categories: changing nature of the disease (emotional issues, cognitive struggles, unpredictable physical symptoms), intrapersonal issues (personal meaning of work, preserving a work identity), interpersonal issues (managing disclosure, gaining coworker support, organizational culture issues), and work-sustainability strategies (making personal adjustments, using social support, using workplace accommodations). Using these themes, we developed the Job Sustainability Model to illustrate how disease, personal, and work-related factors interact to influence what type of coping behaviors are used and when. Initially, employees with arthritis rely on making personal adjustments, using social support, and medical intervention. However, when these coping behaviors fail to be effective, they draw upon workplace accommodations and resources. CONCLUSION: Arthritis disrupts an employee's work life by impairing his or her capacity to be a productive worker. Our results highlight how employees with arthritis make strategic adaptations to maintain a productive work life for as long as possible. The findings of this study have implications for work-related interventions aimed at preserving employment

Rizzello E, Ntani G, and Coggon D. Correlations between pain in the back and neck/upper limb in the European Working Conditions Survey. BMC Musculoskeletal Disorders. 2019; 20(1):38.

<https://doi.org/10.1186/s12891-019-2404-8> [open access]

Abstract: BACKGROUND: Recent research has suggested that wide international variation in the prevalence of disabling regional pain among working populations is driven largely by factors predisposing to musculoskeletal pain in general and not specific to individual anatomical sites. We sought to confirm this finding, using data from an independent source. METHODS: Using data from the

fifth (2010) and sixth (2015) European Working Conditions Surveys, we explored correlations between the one-year prevalence of pain in the back and neck/upper limb among people of working age across 33 European countries, and between changes in pain prevalence at the two anatomical sites from 2010 to 2015. RESULTS: Each survey recruited ≥ 1000 participants per country, response rates ranging from 11 to 78%. In 2010, the estimated one-year population prevalence of back pain ranged from 23% in Ireland to 66% in Portugal, and that of pain in the neck/upper limb from 25% in Ireland to 69% in Finland, the prevalence of pain at the two anatomical sites being correlated across the 33 countries ($r = 0.42$). A similar pattern was apparent in 2015. For back pain, the percentage change in prevalence from 2010 to 2015 varied from - 41.4% (Hungary) to + 29.6% (Ireland), with a mean across countries of - 3.0%. For neck/upper limb pain, the variation was from - 41.0% (Hungary) to + 44.1% (Romania), with an average of - 0.1%. There was a strong correlation across countries in the change in pain prevalence at the two anatomical sites ($r = 0.85$). CONCLUSIONS: Our findings accord with the hypothesis that international variation in common pain complaints is importantly driven by factors that predispose to musculoskeletal pain in general

Ronnblad T, Gronholm E, Jonsson J, Koranyi I, Orellana C, Kreshpaj B, et al. Precarious employment and mental health: a systematic review and meta-analysis of longitudinal studies. Scandinavian Journal of Work, Environment & Health. 2019; [epub ahead of print].
<https://doi.org/10.5271/sjweh.3797>

Wagner A, Rieger MA, Manser T, Sturm H, Hardt J, Martus P, et al. Healthcare professionals' perspectives on working conditions, leadership, and safety climate: a cross-sectional study. BMC Health Services Research. 2019; 19(1):53.
<https://doi.org/10.1186/s12913-018-3862-7> [open access]

Abstract: BACKGROUND: Promoting patient and occupational safety are two key challenges for hospitals. When aiming to improve these two outcomes synergistically, psychosocial working conditions, leadership by hospital management and supervisors, and perceptions of patient and occupational safety climate have to be considered. Recent studies have shown that these key topics are interrelated and form a critical foundation for promoting patient and occupational safety in hospitals. So far, these topics have mainly been studied independently from each other. The present study investigated hospital staffs' perceptions of four different topics: (1) psychosocial working conditions, (2) leadership, (3) patient safety climate, and (4) occupational safety climate. We present results from a survey in two German university hospitals aiming to detect differences between nurses and physicians. METHODS: We performed a cross-sectional study using a standardized paper-based questionnaire. The survey was conducted with nurses and physicians to assess the four topics. The instruments mainly consisted of scales of the German version of the COPSQ (Copenhagen

Psychosocial Questionnaire), one scale of the Copenhagen Burnout Inventory (CBI), scales to assess leadership and transformational leadership, scales to assess patient safety climate using the Hospital Survey on Patient Safety Culture (HSPSC), and analogous items to assess occupational safety climate.

RESULTS: A total of 995 completed questionnaires out of 2512 distributed questionnaires were returned anonymously. The overall response rate was 39.6%. The sample consisted of 381 physicians and 567 nurses. We found various differences with regard to the four topics. In most of the COPSOQ and the HSPSC-scales, physicians rated psychosocial working conditions and patient safety climate more positively than nurses. With regard to occupational safety, nurses indicated higher occupational risks than physicians. **CONCLUSIONS:** The WorkSafeMed study combined the assessment of the four topics psychosocial working conditions, leadership, patient safety climate, and occupational safety climate in hospitals. Looking at the four topics provides an overview of where improvements in hospitals may be needed for nurses and physicians. Based on these results, improvements in working conditions, patient safety climate, and occupational safety climate are required for health care professionals in German university hospitals - especially for nurses

Wahrendorf M, Hoven H, Goldberg M, Zins M, and Siegrist J. Adverse employment histories and health functioning: the CONSTANCES study. International Journal of Epidemiology. 2018; [epub ahead of print].

<https://doi.org/10.1093/ije/dyy235>

Abstract: Background: With changing employment histories in European labour markets, occupational health research needs to be supplemented by an approach that integrates adverse characteristics of entire employment histories, in terms of precarious, discontinued and disadvantaged employment careers. We analyse associations of adverse employment histories and six measures of health functioning, including affective, physical and cognitive functioning.

Methods: We use baseline data from the CONSTANCES study with detailed retrospective data on previous employment histories that are linked to current health functioning among people aged 45-60 years (men = 15 134; women = 16 584). The following career characteristics are assessed (all referring to careers between ages 25 and 45 years): number of jobs with temporary contracts, number of job changes, number of unemployment periods, years out of work, mode occupational position and lack of job promotion. The measures of health functioning range from depressive symptoms, standing balance, walking speed, lung function, to verbal memory and semantic fluency. **Results:** For both men and women, multilevel regressions (participant nested in health-examination centre) revealed that adverse employment histories are associated with poor health functioning later on, in particular persistent disadvantage in terms of low occupational position, repeated periods of unemployment and weak labour-market ties (years out of work). Findings remain consistent after excluding respondents who had a health-related career interruption or already retired before age 45 years and, additionally, after adjusting for age, partnership and

education. Conclusion: Findings call for increased intervention efforts among more disadvantaged groups of the labour market at early-career stages

*IWH authored publications.