

IWH Research Alert
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**Brewer G, Holt B, and Malik S. Workplace bullying in risk and safety professionals. *Journal of Safety Research*. 2018; 64:129-133.
<https://doi.org/10.1016/j.jsr.2017.12.015>**

Abstract: INTRODUCTION: Previous research demonstrates that workplace bullying impacts the welfare of victimized employees, with further consequences for the organization and profession. There is, however, a paucity of information relating to the bullying directed at risk and safety professionals. The present study was conducted to address this issue. METHOD: Risk and safety professionals (N=420) completed the Negative Acts Questionnaire - Revised and Brief Cope, and reported the extent to which they had been pressured to make or amend a risk or safety based decision. RESULTS: Those experiencing workplace bullying were more likely to engage in a range of coping behaviors, with exposure to work-related and personal bullying particularly influential. Workplace bullying also predicted pressure to make or change a risk or safety based decision. Work related and physically intimidating bullying were particularly important for this aspect of professional practice. CONCLUSIONS: Findings are discussed with regard to current practice and the support available to risk and safety professionals. PRACTICAL APPLICATIONS: Risk and safety professionals require additional support in relation to workplace bullying and specifically guidance to resist pressure to make or change a risk or safety based decision

**Cervini-Pla M and Vall Castello J. The earnings and employment losses before entering the disability system. *European Journal of Health Economics*. 2018; 19(8):1111-1128.
<https://doi.org/10.1007/s10198-018-0960-8>**

Abstract: Although a number of papers in the literature have shown the employment and wage differences between individuals receiving disability benefits and non-disabled individuals, not much is known about the potential employment and wage losses that disabled individuals suffer before being officially accepted into the disability insurance system (DI). Therefore, in this paper we compare individuals that enter into the DI system due to a progressive deterioration in the health status (ordinary illness) to similar non-disabled individuals. Our aim is to identify the differences in employment and wages between these two groups before disabled individuals are officially accepted into the DI system. We combine matching models and difference-in-difference and we find that the wage (employment) growth patterns of both groups of workers become significantly different three (five) years before entering the DI system. More specifically, our estimates suggest that 1 year before entering the system, there is a difference of 79 Euros/month in the wages of the two groups (8.3% of average wage) as well as a 7.8% point difference in employment probabilities

Gould-Werth A, Morrison K, and Ben-Shalom Y. Employers' perspectives on accommodating and retaining employees with newly acquired disabilities: an exploratory study. Journal of Occupational Rehabilitation. 2018; [epub ahead of print].

<https://doi.org/10.1007/s10926-018-9806-6>

Abstract: Introduction Timely and appropriate accommodations can help employees who experience disabilities stay at work instead of exiting the labor force. Employers can play a critical role in connecting such workers with the accommodations they need. This qualitative study seeks to inform policy makers who want to improve workforce retention outcomes by uncovering factors that affect whether employers provide accommodations to, and ultimately retain, employees with disabilities. Methods We conducted semistructured interviews with a convenience sample of human resources professionals in 14 Arkansas-based employers, yielding detailed information on 50 cases in which an employee developed or disclosed a disability. We analyzed the interviews using a grounded theory approach and compared cases to identify key themes emerging across subgroups of cases. Results Two organization-level factors and four employee-level factors influenced employers' efforts to accommodate and retain employees with disabilities: employer resources; employers' communication with the employee and other stakeholders; employee tenure; employee work performance; active/sedentary nature of employee role; and the severity and type of employees' health conditions. Conclusions Consistent with prior literature, employers with greater access to resources and better ability to communicate generally made greater effort to accommodate and retain employees with disabilities. However, employers in the study did not deploy these resources and processes consistently when making decisions about whether and how to provide accommodations to workers with disabilities; employee-level characteristics affected their actions. Policy makers should

consider intervention approaches that reach workers who may be overlooked by employers with scarce resources

Harvey EJ, Waterson P, and Dainty ARJ. Beyond ConCA: rethinking causality and construction accidents. *Applied Ergonomics*. 2018; 73:108-121.

<https://doi.org/10.1016/j.apergo.2018.06.001>

Abstract: The construction industry takes an orthodox approach to safety: Finding root causes, quantifying risk, and often blaming frontline workers. However, safety has reached a plateau and the limitations of this approach are starting to be acknowledged. A sociotechnical systems approach (as applied in the ConCA model) presents new opportunities to understand accident causation by linking immediate accident circumstances with the distal shaping and originating influences. 32 construction safety managers, consultants, and experts contributed their views regarding the hazards of construction (both human and physical) and the difficulties managing these. The findings provide an insight into the work of construction safety managers and their decision making which is influenced by industry-wide pressures and worker attributes over physical hazards. Construction suffers from a wide range of pressures; a combination of both top-down, from the client, and bottom-up challenges from the workforce it attracts. The original ConCA model has been revised to reflect the findings. By applying systems thinking, the relationships between negative perceptions of workers' risk-taking and these challenges can be crystallised. The results support integrating safety into primary activities to increase engagement, learning legacies to transfer knowledge between projects, multi-disciplinary teams to raise risk awareness, empowerment to combat their feelings of dissatisfaction and disloyalty, and collaboration in risk management to incorporate workers' expertise and ensure they feel valued

Hudon A, Ehrmann Feldman D, and Hunt M. Tensions living out professional values for physical therapists treating injured workers. *Qualitative Health Research*. 2018; [epub ahead of print].

<https://doi.org/10.1177/1049732318803589>

Abstract: Health care services provided by workers' compensation systems aim to facilitate recovery for injured workers. However, some features of these systems pose barriers to high quality care and challenge health care professionals in their everyday work. We used interpretive description methodology to explore ethical tensions experienced by physical therapists caring for patients with musculoskeletal injuries compensated by Workers' Compensation Boards. We conducted in-depth interviews with 40 physical therapists and leaders in the physical therapy and workers' compensation fields from three Canadian provinces and analyzed transcripts using concurrent and constant comparative techniques. Through our analysis, we developed inductive themes reflecting significant challenges experienced by participants in upholding three core professional values: equity, competence, and autonomy. These

challenges illustrate multiple facets of physical therapists' struggles to uphold moral commitments and preserve their sense of professional integrity while providing care to injured workers within a complex health service system

Kadijk EA, van den Heuvel S, Ybema JF, and Leijten FRM. The influence of multi-morbidity on the work ability of ageing employees and the role of coping style. Journal of Occupational Rehabilitation. 2018; [epub ahead of print].

<https://doi.org/10.1007/s10926-018-9811-9>

Abstract: Purpose With an ageing workforce, employees are increasingly confronted with multi-morbidity. Especially physical and mental health problems often occur together. This study aims to (i) explore the effect of multi-morbidity on work ability of ageing employees, more specifically the effects of the number of health problems and the combination of physical and mental health problems, and to (ii) explore to what extent the effects of physical and mental health problems on work ability are explained by applying differing coping styles. Methods A 1 year follow up study (2012-2013) was conducted among 7175 employees aged 45-64 years. Linear regression analyses were conducted to examine longitudinal relationships between multi-morbidity, coping styles and work ability. To determine whether coping styles mediate the effects of multi-morbidity on work ability, Sobel tests were conducted. Results A higher number of health problems was related to poorer work ability, but this negative effect stabilized from three health problems onwards. The combination of physical and mental health problem(s) was more strongly related to poorer work ability than only physical health problems. The negative relation between physical health problems and work ability was partly suppressed by active coping, while the negative relation between the combination of physical and mental health problem(s) on work ability was partly explained by avoidant coping. Conclusions Ageing employees with multi-morbidity have a reduced work ability, especially when mental health problems are present. The greater negative effects of the combination of physical and mental health problems on work ability are partially due to unfavorable coping styles

Li Y, Chen PY, Tuckey MR, McLinton SS, and Dollard MF. Prevention through job design: identifying high-risk job characteristics associated with workplace bullying. Journal of Occupational Health Psychology. 2018; [epub ahead of print].

<https://doi.org/10.1037/ocp0000133>

Abstract: Work environment hypothesis, a predominant theoretical framework in workplace bullying literature, postulates that job characteristics may trigger workplace bullying. Yet, these characteristics are often assessed by employees based on their experience of the job. This study aims to assess how job characteristics, independently assessed via Occupational Information Network (O*NET), are related to perceived job characteristics reported by employees, which, in turn, are associated with self-reported workplace bullying. Multilevel

mediation analyses from 3,829 employees in 209 occupations confirmed that employees, whose work schedules are more irregular and whose work involves a higher level of conflictual contact (as assessed by O*NET), report experiencing higher job demands, which are associated with higher exposure to bullying. Moreover, employees working in jobs structured to allow for more discretion in decision-making (as assessed by O*NET) report experiencing more job autonomy and are less likely to experience bullying. The results offer some clues as to how the way in which a job is structured is related to how that job is perceived, which in turn is associated with exposure to bullying. Our findings also suggest that a job design perspective to redesign certain job characteristics may offer an additional viable approach to prevent workplace bullying. (PsycINFO Database Record (c) 2018 APA, all rights reserved)

Lunny C, Brennan SE, McDonald S, and McKenzie JE. Toward a comprehensive evidence map of overview of systematic review methods: paper 2: risk of bias assessment; synthesis, presentation and summary of the findings; and assessment of the certainty of the evidence. *Systematic Reviews*. 2018; 7(1):159.

<https://doi.org/10.1186/s13643-018-0784-8> [open access]

Abstract: BACKGROUND: Overviews of systematic reviews (SRs) attempt to systematically retrieve and summarise the results of multiple systematic reviews. This is the second of two papers from a study aiming to develop a comprehensive evidence map of the methods used in overviews. Our objectives were to (a) develop a framework of methods for conducting, interpreting and reporting overviews (stage I)-the Methods for Overviews of Reviews (MOoR) framework-and (b) to create an evidence map by mapping studies that have evaluated overview methods to the framework (stage II). In the first paper, we reported findings for the four initial steps of an overview (specification of purpose, objectives and scope; eligibility criteria; search methods; data extraction). In this paper, we report the remaining steps: assessing risk of bias; synthesis, presentation and summary of the findings; and assessing certainty of the evidence arising from the overview. **METHODS:** In stage I, we identified cross-sectional studies, guidance documents and commentaries that described methods proposed for, or used in, overviews. Based on these studies, we developed a framework of possible methods for overviews, categorised by the steps in conducting an overview. Multiple iterations of the framework were discussed and refined by all authors. In stage II, we identified studies evaluating methods and mapped these evaluations to the framework. **RESULTS:** Forty-two stage I studies described methods relevant to one or more of the latter steps of an overview. Six studies evaluating methods were included in stage II. These mapped to steps involving (i) the assessment of risk of bias (RoB) in SRs (two SRs and three primary studies, all reporting evaluation of RoB tools) and (ii) the synthesis, presentation and summary of the findings (one primary study evaluating methods for measuring overlap). **CONCLUSION:** Many methods have been described for use in the latter steps in conducting an overview; however,

evaluation and guidance for applying these methods is sparse. The exception is RoB assessment, for which a multitude of tools exist-several with sufficient evaluation and guidance to recommend their use. Evaluation of other methods is required to provide a comprehensive evidence map

Marcum JL, Foley M, Adams D, and Bonauto D. Characteristics of construction firms at risk for future workers' compensation claims using administrative data systems, Washington State. Journal of Safety Research. 2018; 65:53-58.

<https://doi.org/10.1016/j.jsr.2018.02.005>

Abstract: INTRODUCTION: Construction is high-hazard industry, and continually ranks among those with the highest workers' compensation (WC) claim rates in Washington State (WA). However, not all construction firms are at equal risk. We tested the ability to identify those construction firms most at risk for future claims using only administrative WC and unemployment insurance data. METHODS: We collected information on construction firms with 10-50 average full time equivalent (FTE) employees from the WA unemployment insurance and WC data systems (n=1228). Negative binomial regression was used to test the ability of firm characteristics measured during 2011-2013 to predict time-loss claim rates in the following year, 2014. RESULTS: Claim rates in 2014 varied by construction industry groups, ranging from 0.7 (Land Subdivision) to 4.6 (Foundation, Structure, and Building Construction) claims per 100 FTE. Construction firms with higher average WC premium rates, a history of WC claims, increasing number of quarterly FTE, and lower average wage rates during 2011-2013 were predicted to have higher WC claim rates in 2014. CONCLUSIONS: We demonstrate the ability to leverage administrative data to identify construction firms predicted to have future WC claims. This study should be repeated to determine if these results are applicable to other high-hazard industries. Practical Applications: This study identified characteristics that may be used to further refine targeted outreach and prevention to construction firms at risk

Moore LL, Wurzelbacher SJ, and Shockey TM. Workers' compensation insurer risk control systems: opportunities for public health collaborations. Journal of Safety Research. 2018; 66:141-150.

<https://doi.org/10.1016/j.jsr.2018.07.004>

Abstract: INTRODUCTION: Workers' compensation (WC) insurers offer services and programs for prospective client selection and insured client risk control (RC) purposes. Toward these aims, insurers collect employer data that may include information on types of hazards present in the workplace, safety and health programs and controls in place to prevent injury/illness, and return-to-work programs to reduce injury/illness severity. Despite the potential impact of RC systems on workplace safety and health and the use of RC data in guiding prevention efforts, few research studies on the types of RC services provided to employers or the RC data collected have been published in the peer-reviewed literature. METHODS: Researchers conducted voluntary interviews with nine

private and state-fund WC insurers to collect qualitative information on RC data and systems. RESULTS: Insurers provided information describing their RC data, tools, and practices. Unique practices as well as similarities including those related to RC services, policyholder goals, and databases were identified. CONCLUSIONS: Insurers collect and store extensive RC data, which have utility for public health research for improving workplace safety and health. PRACTICAL APPLICATIONS: Increased public health understanding of RC data and systems and an identification of key collaboration opportunities between insurers and researchers will facilitate increased use of RC data for public health purposes

Petkovic J, Welch V, Jacob MH, Yoganathan M, Ayala AP, Cunningham H, and Tugwell P. Do evidence summaries increase health policy-makers' use of evidence from systematic reviews? *Campbell Systematic Reviews*. 2018; 8.

<https://doi.org/10.4073/csr.2018.8> [open access]

Sowah D, Boyko R, Antle D, Miller L, Zakhary M, and Straube S. Occupational interventions for the prevention of back pain: overview of systematic reviews. *Journal of Safety Research*. 2018; 66:39-59.

<https://doi.org/10.1016/j.jsr.2018.05.007> [open access]

Abstract: INTRODUCTION: We conducted an overview of systematic reviews of interventions for the prevention of low back pain (LBP) that can be conducted in a workplace setting. METHODS: An electronic literature search was performed in Medline, EMBASE, and the Cochrane Library. Published peer-reviewed systematic reviews and meta-analyses, which described interventions for the primary or secondary prevention of LBP applicable to a workplace setting, were eligible for inclusion. The methodological quality of the included systematic reviews was assessed with the AMSTAR tool. The primary outcome of interest was the incidence of LBP; secondary outcomes were LBP-associated absenteeism, activity interference, and costs related to LBP. RESULTS: Twenty-eight eligible articles published between 1994 and 2016 were included in a qualitative synthesis following our screening of abstracts and full-text articles. The AMSTAR rating revealed 14 reviews of high, 10 of moderate, and 4 of low methodological quality. The identified interventions included workplace modifications (6 reviews, 10 studies, 6,751 subjects); shoe insoles (4 reviews, 6 studies, 2,356 subjects); and lumbar supports and other assistive devices (15 reviews, 18 studies, 60,678 subjects). Educational interventions investigated were back schools (10 reviews, 30 studies, 9,973 subjects); manual material handling techniques/advice (6 reviews, 24 studies, 10,505 subjects); and other forms of instruction including pamphlets, booklets, and other media (four reviews, 14 studies, 11,991 subjects). Exercise interventions, investigated in 12 reviews (35 studies, 19,330 subjects), showed moderate quality evidence of effectiveness for exercise interventions alone or in conjunction with educational interventions; no other type of intervention was consistently effective in the prevention of LBP

or LBP-associated outcomes of interest. **CONCLUSIONS:** Our overview provides evidence of effectiveness for exercise with or without educational interventions in the prevention of LBP. **PRACTICAL APPLICATIONS:** Exercise interventions with or without educational interventions that can be applied in the workplace have the potential to prevent LBP

Yazdani A and Wells R. Barriers for implementation of successful change to prevent musculoskeletal disorders and how to systematically address them. *Applied Ergonomics*. 2018; 73:122-140.

<https://doi.org/10.1016/j.apergo.2018.05.004> [open access]

Abstract: This scoping review identified common barriers and facilitators encountered during the implementation of changes to prevent musculoskeletal disorders (MSD) and examined their relationship with those encountered in general Occupational Health and Safety (OHS) efforts. Thematic analysis of the literature identified 11 barriers: (i) Lack of time; (ii) Lack of resources; (iii) Lack of communication; (iv) Lack of management support, commitment, and participation; (v) Lack of knowledge and training; (vi) Resistance to change; (vii) Changing work environment; (viii) Scope of activities; (ix) Lack of trust, fear of job loss, or loss of authority; (x) Process deficiencies; and (xi) Difficulty of implementing controls. Three facilitators identified were: (i) Training, knowledge and ergonomists' support; (ii) Communication, participation and support; and (iii) An effective implementation process. The barriers and facilitators identified were similar to those in general OHS processes. The integration of MSD prevention into a general management system approach may overcome these barriers

Yuma-Guerrero P, Orsi R, Lee PT, and Cubbin C. A systematic review of socioeconomic status measurement in 13 years of U.S. injury research. *Journal of Safety Research*. 2018; 64:55-72.

<https://doi.org/10.1016/j.jsr.2017.12.017>

Abstract: **OBJECTIVE:** The purpose of this review was to assess the impact of socioeconomic status (SES) on injury and to evaluate how U.S. injury researchers have measured SES over the past 13 years in observational research studies. **DESIGN & METHODS:** This systematic review included 119 US injury studies indexed in PubMed between January 1, 2002 and August 31, 2015 that used one or more individual and/or area-level measures of SES as independent variables. Study findings were compared to the results of a previous review published in 2002. **RESULTS:** Findings indicate SES remains an important predictor of injury. SES was inversely related to injury in 78 (66%) of the studies; inverse relationships were more consistently found in studies of fatal injury (77.4%) than in studies of non-fatal injury (58%). Approximately two-thirds of the studies (n=73, 61%) measured SES along a gradient and 59% used more than one measure of SES (n=70). Studies that used a gradient measure of SES and/or more than one measure of SES identified significant relationships more often. These findings were essentially equivalent to those of a similar 2002 review (Cubbin & Smith, 2002). **CONCLUSIONS:** There remains a need to

improve measurement of SES in injury research. Public health training programs should include best practices for measurement of SES, which include: measuring SES along a gradient, selecting SES indicators based on the injury mechanism, using the smallest geographic region possible for area-level measures, using multiple indicators when possible, and using both individual and area-level measures as both contribute independently to injury risk. Area-level indicators of SES are not accurate estimates of individual-level SES. **PRACTICAL APPLICATIONS:** Injury researchers should measure SES along a gradient and incorporate individual and area-level SES measures that are appropriate to the injury outcome under study