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***Daza JF, Chesney TR, Morales JF, Xue Y, Lee S, Amado LA, Pivetta B, Mbadjeu Hondjeu AR, Jolley R, Diep C, Alibhai SMH, Smith PM, et al. Clinical tools to assess functional capacity during risk assessment before elective noncardiac surgery : a scoping review. *Annals of Internal Medicine*. 2024; [epub ahead of print].**

<https://doi.org/10.7326/ANNALS-24-00413>

Abstract: Background: Functional capacity is critical to preoperative risk assessment, yet guidance on its measurement in clinical practice remains lacking. Purpose: To identify functional capacity assessment tools studied before surgery and characterize the extent of evidence regarding performance, including in populations where assessment is confounded by noncardiopulmonary reasons. Data sources: MEDLINE, EMBASE, and EBM Reviews (until July 2024). Study selection: Studies evaluating performance of functional capacity assessment tools administered before elective noncardiac surgery to stratify risk for postoperative outcomes. Data extraction: Study details, measurement properties, pragmatic qualities, and/or clinical utility metrics. Data synthesis: 6 categories of performance-based tests and 5 approaches using patient-reported exercise tolerance were identified. Cardiopulmonary exercise testing (CPET) was the most studied tool (132 studies, 32 662 patients) followed by field walking tests (58 studies, 9393 patients) among performance-based tests. Among patient-reported assessments, the Duke Activity Status Index (14 studies, 3303 patients) and unstructured assessments (19 studies, 28 520 patients) were most researched. Most evidence focused on predictive validity (92% of studies), specifically accuracy in predicting cardiorespiratory complications. Several tools lacked evidence on reliability (test consistency across similar measurements), pragmatic qualities (feasibility of implementation), or concurrent criterion validity (correlation to gold standard). Only CPET had evidence on clinical utility (whether administration improved postoperative outcomes). Older adults (≥ 65 years) were well represented across studies,

whereas there were minimal data in patients with obesity, lower-limb arthritis, and disability. Limitation: Synthesis focused on reported data without requesting missing information. Conclusion: Though several tools for preoperative functional capacity assessment have been studied, research has overwhelmingly focused on CPET and only 1 aspect of validity (predictive validity). Important evidence gaps remain among vulnerable populations with obesity, arthritis, and physical disability. Primary funding source: None. (Open Science Framework: <https://osf.io/ah7u5>).

***Salazar AP, Lecours S, Engel L, Gignac MAM, Rotenberg S, Zarshenas S, et al. Responding to the ongoing pandemic-related challenges of individuals with brain injury through the perspective of community-service in Canada: a qualitative study. Brain Injury. 2024; [epub ahead of print].**

<https://doi.org/10.1080/02699052.2024.2426683>

Abstract: OBJECTIVE: To investigate brain injury (BI) associations' perspectives regarding the impacts of the second year of the COVID-19 pandemic on individuals with BI and BI associations services across Canada. METHODS: This qualitative descriptive study included 26 representatives of Canadian BI associations that participated in six online focus groups to discuss the effects of the second year of the pandemic on clients living with BI and on the provision of community services. RESULTS: Findings revealed three main themes: 1) ongoing pandemic-related challenges faced by clients living with BI, including worsening mental health and basic needs insecurities, difficulties faced by clients in adhering to safety measures, and ongoing technological issues; 2) ongoing adaptations to accommodate clients' needs, including offering tailored services, ensuring consistent and transparent safety measures, and providing hybrid services; and 3) developing a sustainable 'new normal' aligned with association mandates and resources by expanding networks and building resilience. CONCLUSION: The unfolding of the pandemic has brought increased challenges for people with BI and reinforced the need for adapted, clear, and accessible public health information to ensure the safety of vulnerable populations in times of crisis. It is essential to bolster community-based associations that provide direct care to people with BI

Bazzoli A and Probst TM. Best practice recommendations to measure and estimate workplace accident underreporting. Safety Science. 2025; 181:106660.

<https://doi.org/10.1016/j.ssci.2024.106660> [open access]

Abstract: Despite research indicating work-related accidents and injuries are extensively underreported, measurement and analytical strategies to investigate this phenomenon have widely varied. Using the results from three studies, we provide six best practice recommendations for applied scholars in underreporting research based on a comprehensive review across several disciplines (Study 1) of measurement and analytical choices and investigate which of those are the most appropriate to model counts of underreported workplace accidents using both synthetic (Study 2) and real-world (Study 3) data. These recommendations are: (i) use multi-item recognition-based scales, (ii) use counts (as opposed to proportions) but incorporate exposure information, (iii) think about the meaning of zeroes in the distribution, (iv) acknowledge that small samples are problematic regardless of model used to estimate parameters, (v) recognize that general linear model with raw outcomes and generalized linear models with negative binomial and Poisson distributions seem to be substantially equivalent in medium and large samples (i.e., $N > 500$), and (vi) estimate more than one model and compare them using average marginal effects before reaching conclusions. These

recommendations can also be extended to other research domains using count data both within and outside of occupational health psychology

Christiansen F, Gynning BE, Lashari A, Zuberbuhler JP, Johansson G, and Brulin E. Associations between job demand-control-support and high burnout risk among physicians in Sweden: a cross-sectional study. *Journal of Occupational Medicine and Toxicology*. 2024; 19(1):42.

<https://doi.org/10.1186/s12995-024-00441-6> [open access]

Abstract: BACKGROUND: The knowledge about job demands, control, and support, and their potential associations with burnout risk among physicians in Sweden, is limited. This study aimed to explore (i) factors of the Job Demand-Control-Support (J-DCS) model across different groups of physicians in Sweden, (ii) their association with high burnout risk, and (iii) the potential buffering impact of job control and support. METHODS: Cross-sectional data from the Swedish Longitudinal Occupational Health in Healthcare Survey (LOHHCS) study cohort was used. In 2021, a total of 2032 respondents submitted questionnaire data comprising J-DCS measures (i.e., job demands, workplace control and task-level control, and social support from peers and managers). Burnout risk was measured using the Burnout Assessment Tool. Binary logistic regression models were used to investigate the associations between the J-DCS variables and high burnout risk. Interaction analysis was performed to explore any moderation of the associations. RESULTS: Job demands were significantly associated with increased odds of high burnout risk (odds ratio (OR) 2.71, 95% confidence interval (CI) 1.91-3.84. Workplace control (OR 0.50, 95% CI 0.35-0.71) and peer support (OR 0.61, 95% CI 0.48-0.77) were significantly associated with reduced odds of high burnout risk. The interaction analysis showed no significant moderation of the association between job demands and high burnout risk by either peer support or workplace control, and no buffering impact was found. CONCLUSION: Job demands were associated with high burnout risk among physicians in Sweden. Although workplace control and peer support had inverse associations with high burnout risk, no moderation or buffering impact on the association between job demands and high burnout risk was found. Longitudinal studies are needed to confirm these associations

Glaubitz R, Harnack-Eber A, and Wetter M. The gender gap in lifetime earnings: a microsimulation approach. *Labour*. 2024; 38(4):425-474.

<https://doi.org/10.1111/labr.12274> [open access]

Abstract: To obtain a more complete understanding of the persisting gender earnings gap in Germany, this paper investigates both the cross-sectional and lifetime dimension of gender inequalities. Based on a dynamic microsimulation model, we analyse how gender differences accumulate over work lives to examine the lifetime dimension of the gender gap. We estimate an average gender gap in lifetime earnings of 51.5 per cent for birth cohorts 1964–72. We show that this unadjusted gender lifetime earnings gap increases strongly with the number of children, ranging from 17.3 per cent for childless women to 68.0 per cent for women with three or more children. Results from a counterfactual analysis approach show an adjusted gender gap in lifetime earnings of around 10 per cent, suggesting that the gender gap in lifetime earnings is rather driven by gender differences in observable characteristics than by differences in rewards.

Guo X, Liu Y, Tan Y, Xia Z, and Fu H. Hazard identification performance comparison between virtual reality and traditional construction safety training modes for different learning style individuals. Safety Science. 2024; 180:106644.

<https://doi.org/10.1016/j.ssci.2024.106644>

Hyejin K. Evaluation of the impact of Korea's employment protection legislation on vocational training discrimination against non-regular workers. Evaluation and Program Planning. 2024; 107:102493.

<https://doi.org/10.1016/j.evalprogplan.2024.102493>

Abstract: This longitudinal study evaluated the effectiveness of Korea's 2007 employment protection legislation (EPL), aimed at mitigating labor discrimination against non-regular workers (NRW). Specifically, we use the Korean Workplace Panel Survey data from 2005 to 2013 and adopt a difference-in-difference methodology (DD) to explore whether establishment reduces the gap in training opportunities between NRW and regular workers (RW). Results show that compliance with government regulations depends on how business establishments react to the rules and the characteristics of these stakeholders. Overall, the 2007 reform partially improved the training opportunities in NRW. However, this positive outcome was mostly concentrated in companies with affluent resources or stronger bargaining power of NRW. Policymakers should consider in what context the policy works well and what factors may hinder its operation at the policy design stage

Jiao Z, Huang K, Wang Q, Jia G, Zhong Z, and Cai Y. Improved REBA: deep learning based rapid entire body risk assessment for prevention of musculoskeletal disorders. Ergonomics. 2024; 67(10):1356-1370.

<https://doi.org/10.1080/00140139.2024.2306315>

Abstract: Preventing work-related musculoskeletal disorders (WMSDs) is crucial in reducing their impact on individuals and society. However, the existing mainstream 2D image-based approach is insufficient in capturing the complex 3D movements and postures involved in many occupational tasks. To address this, an improved deep learning-based rapid entire body assessment (REBA) method has been proposed. The method takes working videos as input and automatically outputs the corresponding REBA score through 3D pose reconstruction. The proposed method achieves an average precision of 94.7% on real-world data, which is comparable to that of ergonomic experts. Furthermore, the method has the potential to be applied across a wide range of industries as it has demonstrated good generalisation in multiple scenarios. The proposed method offers a promising solution for automated and accurate risk assessment of WMSDs, with implications for various industries to ensure the safety and well-being of workers

Khalil H, Pollock D, McInerney P, Evans C, Moraes EB, Godfrey CM, et al. Automation tools to support undertaking scoping reviews. Research Synthesis Methods. 2024; 15(6):839-850.

<https://doi.org/10.1002/jrsm.1731>

Abstract: OBJECTIVE: This paper describes several automation tools and software that can be considered during evidence synthesis projects and provides guidance for their integration in the conduct of scoping reviews. STUDY DESIGN AND SETTING: The guidance presented in this work is adapted from the results of a scoping review and consultations with the JBI Scoping Review Methodology group. RESULTS: This paper describes several reliable, validated automation tools and software that can be used to enhance the conduct of scoping reviews. Developments in the

automation of systematic reviews, and more recently scoping reviews, are continuously evolving. We detail several helpful tools in order of the key steps recommended by the JBI's methodological guidance for undertaking scoping reviews including team establishment, protocol development, searching, de-duplication, screening titles and abstracts, data extraction, data charting, and report writing. While we include several reliable tools and software that can be used for the automation of scoping reviews, there are some limitations to the tools mentioned. For example, some are available in English only and their lack of integration with other tools results in limited interoperability. **CONCLUSION:** This paper highlighted several useful automation tools and software programs to use in undertaking each step of a scoping review. This guidance has the potential to inform collaborative efforts aiming at the development of evidence informed, integrated automation tools and software packages for enhancing the conduct of high-quality scoping reviews

Kolaski K, Clarke M, and Logan LR. Analysis of risk of bias assessments in a sample of intervention systematic reviews, part II: focus on risk of bias tools reveals few meet current appraisal standards. *Journal of Clinical Epidemiology*. 2024; 174:111460.

<https://doi.org/10.1016/j.jclinepi.2024.111460>

Abstract: Objectives: Risk of bias (RoB) assessment is a critical part of any systematic review (SR). There are multiple tools available for assessing RoB of the studies included in a SR. The conduct of these assessments in intervention SRs are addressed by three items in AMSTAR-2, considered the preferred tool for critically appraising an intervention SR. This study focuses attention on item 9, which assesses the ability of a RoB tool to adequately address sources of bias, particularly in randomized trials (RCTs) and nonrandomized studies of interventions (NRSI). Our main objective is to report the detailed results of our examination of both Cochrane and non-Cochrane RoB tools and distinguish those that meet AMSTAR-2 item 9 appraisal standards. Study design and setting: We identified critical appraisal tools reported in a sample of 126 SRs reporting on interventions for persons with cerebral palsy published from 2014 to 2021. Eligible tools were those that had been used to assess the primary studies included in these SRs and for which assessment results were reported in enough detail to allow appraisal of the tool. We identified the version of the tool applied as original, modified, or novel and established the applicable study designs as intended by the tools' developers. We then evaluated the potential ability of these tools to assess the four sources of bias specified in AMSTAR-2 item 9 for RCTs and NRSI. We adapted item 9 to appraise tools applied to single-case experimental designs, which we also encountered in this sample of SRs. Results: Most of the eligible tools are recognized by name in the published literature and were applied in the original or modified form. Modifications were applied with considerable variability across the sample. Of the 37 tools we examined, those judged to fully meet the appraisal standards for RCTs included all the Cochrane tools, the original and modified Downs and Black Checklist, and the quality assessment standard for a cross-over study by Ding et al; for NRSI, these included all the Cochrane tools, the original and modified Downs and Black Checklist, and the Research Triangle Institute item bank on Risk of Bias and Precision of Observational Studies for NRSI. In general, tools developed for a specific study design were judged to meet the appraisal standards fully or partially for that design. These results suggest it is unlikely that a single tool will be adequate by AMSTAR-2 item 9 appraisal standards for an intervention SR that includes studies of various designs. Conclusion: To our knowledge, this is the first resource providing SR authors with practical information about the appropriateness and adequacy of RoB tools by the appraisal standards specified in AMSTAR-2 item 9

for RCTs and NRSI. We propose similar methods for appraisal of tools applied to single-case experimental design. We encourage authors to seek contemporary RoB tools developed for use in healthcare-related intervention SRs and designed to evaluate relevant study design features. The tools should address attributes unique to the review topic and research question but not be subjected to unjustified and excessive modifications. We promote recognition of the potential shortcomings of both Cochrane and non-Cochrane RoB tools, even those that perform well by AMSTAR-2 item 9 appraisal standards.

Liu M, Zhang H, and Sui Y. Workplace artificial intelligence regulation in China: between efficiency and social stability. *ILR Review*. 2024; 77(5):813-824.

<https://doi.org/10.1177/00197939241278956b>

Logan J, Webb J, Singh NK, Tanner N, Barrett K, Wall M, et al. Scoping review search practices in the social sciences: a scoping review. *Research Synthesis Methods*. 2024; 15(6):950-963.

<https://doi.org/10.1002/jrsm.1742>

Abstract: A thorough literature search is a key feature of scoping reviews. We investigated the search practices used by social science researchers as reported in their scoping reviews. We collected scoping reviews published between 2015 and 2021 from Social Science Citation Index. In the 2484 included studies, we observed a 58% average annual increase in published reviews, primarily from clinical and applied social science disciplines. Bibliographic databases comprised most of the information sources in the primary search strategy (n = 9565, 75%), although reporting practices varied. Most scoping reviews (n = 1805, 73%) included at least one supplementary search strategy. A minority of studies (n = 713, 29%) acknowledged an LIS professional and few listed one as a co-author (n = 194, 8%). We conclude that to improve reporting and strengthen the impact of the scoping review method in the social sciences, researchers should consider (1) adhering to PRISMA-S reporting guidelines, (2) employing more supplementary search strategies, and (3) collaborating with LIS professionals.

Park H, Tangirala S, Ekkirala S, and Sanaria A. Unnoticed problems and overlooked opportunities: how and when employees fail to speak up under ambiguous threats. *Journal of Applied Psychology*. 2024; 109(10):1571-1591.

<https://doi.org/10.1037/apl0001210>

Abstract: Organizations often need to deal with ambiguous threats, which are complex, unprecedented, and difficult-to-predict events that hold the potential to cause harm. Drawing on the attention-based view of work behavior, we propose that employees do not always remain vigilant to such threats. Consequently, we argue that, in the face of those threats, employees can fail to notice or recognize problems or vulnerabilities in their organizations' work processes or products that can hinder coping. We posit that this effect is, paradoxically, more pronounced when employees are working with trustworthy managers who are perceived as capable and focused enough on the well-being of their units to adequately deal with work challenges. Thereby, we highlight that employees may overlook problems and thus not speak up, precisely when their input is highly desired to address ambiguous threats and can be effectively used by competent and caring managers. Using a combination of field surveys and preregistered experiments, we demonstrate support for our arguments. In the process, we present an alternative attention-based perspective to the voice literature that has so far predominantly focused on cost-benefit-based explanations (i.e., how

employees evaluate the perceived costs of speaking up vs. presumed benefits) when describing hurdles to employee voice. (PsycInfo Database Record (c) 2024 APA, all rights reserved)

Sherratt F, Szabo E, and Hallowell MR. Seeking a scientific and pragmatic approach to safety culture in the North American construction industry. *Safety Science*. 2025; 181:106658.

<https://doi.org/10.1016/j.ssci.2024.106658> [open access]

Abstract: Safety culture remains a key concept in occupational safety management. In the North American construction industry, regulators are growing increasingly interested in safety culture as a phenomenon, requiring a demonstrable 'good safety culture' for a license to operate. However, safety culture is arguably unable to deliver on such ambitions. It remains undefined and the field of safety science that surrounds it is fragmented and incoherent, unable to support theory building and the generation of universal knowledge. Although a variety of models and methodologies can be applied in the research of safety culture, they are often vulnerable to a fallacy of logic – they combine component safety parts and claim the whole as culture – or to more fundamental ontological and epistemological limitations around external validity. Considerations of the investments of time, money and resource for such examinations should also be considered. Here, we unpack these ideas further and make the case for increased coherence in 'safety culture research', with a focus on both scientific rigor and pragmatic application. We reflect on the theory, discussions and debates made to date with the ambition of illuminating areas of commonality and those of conflict within the safety science academic and practitioner communities. Ultimately, we argue for the elimination of safety culture from the safety science lexicon. Instead, robust research of its various component parts, and their relationships to safety performance, will be better able to support the generation of valid and reliable knowledge that also enhances the development of the field of safety science as a whole.

Silva-Penaherrera M and Benavides FG. Excess potential years of working life lost in six countries from Latin America and Europe in 2020 and 2021. *Occupational and Environmental Medicine*. 2024; 81(10):532-534.

<https://doi.org/10.1136/oemed-2023-109406> [open access]

Abstract: Objective: This descriptive study aimed to measure the excess all-cause mortality potential years of working life lost (PYWLL) in the working-age population of six Ibero-American countries in 2020 and 2021. Methods: This study was based on all-cause deaths for the age group 15-69 years for men and women in six countries: Colombia, Costa Rica, México, Peru, Portugal and Spain. The expected PYWLL was the average value determined from the previous 5 years (2015-2019). To estimate the excess of PYWLL, the expected PYWLL was subtracted from the observed PYWLL values for 2020 and 2021, separately. Results: In the four Latin American countries, the excess PYWLL per death was approximately double (between 12 and 16 years) that of the two European countries (between 3 and 9 years). Conclusions: The loss of working-age individuals will probably have a profound social and economic recovery impact, affecting families and communities. The informal employment and labour market structures may be contributing to the adverse effects of the pandemic in the region. Investing in universal, comprehensive and sustainable health and social protection systems in the Latin American countries is crucial to build resilience against current and future crises.

Steel E, Malinen SK, and Naswall K. Improving work-related psychosocial risk management: a mixed methods evaluation of the factors influencing inspectors' practice. *Safety Science*. 2025; 181:106659.

<https://doi.org/10.1016/j.ssci.2024.106659> [open access]

Abstract: In many countries, legal obligations require that organizations manage work-related psychosocial risks. Yet, regulating these risks has proved challenging and existent research highlights a need to improve regulatory capabilities to address these risks. This paper focuses on inspectors' perspectives on engaging with stakeholders about psychosocial risks, with the aim of informing potential capability development strategies. To meet this aim, we used mixed-methods research to understand the individual and job-related factors that influence inspectors' capacity to engage with stakeholders about psychosocial risks. Study 1 (qualitative) involved semi-structured interviews with 12 inspectors and regulatory subject matter experts working in New Zealand. Study 2 (quantitative) builds on the qualitative findings and involved a survey of 86 inspectors. Five themes emerged from Study 1, reflecting the factors that influence inspectors' capacity to engage with stakeholders about psychosocial risks: [1] Training, resources, and knowledge, [2] Interpersonal skills, [3] Need for role-clarity, [4] Attitudes and interest, [5] Job-related barriers. Supporting these findings, the results of Study 2 found positive relationships between task-specific resources (i.e., subject matter knowledge, relevant skills, role-clarity) and task-specific self-efficacy. Results also show that participants' attitudes were predictive of their frequency of engagement with stakeholders regarding psychosocial risks. The findings advance our understanding of ways to improve psychosocial risk regulation by identifying the factors that are important in determining front-line inspectors' capacity to undertake this work. We recommend these factors be considered when designing interventions to improve regulatory capability to address psychosocial risks.

Wuellner S, Turner K, and Spector JT. Emergency department visits for heat-related illness among workers: occupational health surveillance using Washington syndromic surveillance data. *American Journal of Industrial Medicine*. 2024; 67(11):994-1005.

<https://doi.org/10.1002/ajim.23650>

Abstract: BACKGROUND: Information on worker occupation and industry is critical to understanding the occupational risks of heat-related illness (HRI), yet few syndromic surveillance systems capture these key data elements. This study evaluates the work data reported through Washington syndromic surveillance for its utility in characterizing HRI ED visits by industry and occupation. METHODS: Standard industry and occupation codes were assigned to employer name and occupation descriptions reported in Washington ED visit records maintained within the state's syndromic surveillance system, for visits involving HRI in 2020-2022. HRI ED visits involving workplace heat exposure were identified based on discharge diagnoses or on keywords in the triage note or chief complaint fields. HRI ED visits were summarized by patient characteristics, and visit rates were calculated by industry and occupation. RESULTS: Employer name or occupation descriptions were reported in 21.5% of HRI ED records among patients age 16 and older, and in 41.2% of records with mention of heat exposure at work. Twice as many records were classified for industry as for occupation. Agriculture, forestry, fishing, and hunting and transportation and warehousing had the highest rates of HRI ED visits. Specific industries with the highest rates included support activities for agriculture and forestry, the postal service, and fruit and vegetable preserving and specialty food manufacturing. CONCLUSION: Syndromic surveillance data are a valuable source of occupational

health surveillance information when work characteristics are reported, enhancing our understanding of the occupational risks of injuries and illnesses

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