

**ABOUT RESEARCH ALERT**

*Research Alert* is a service provided to you by the Institute for Work & Health (IWH) to help you keep abreast of recent literature in the areas of occupational health and safety, epidemiology, public health and others within the IWH mandate. Please note that these articles have not been reviewed by Institute scientists to assess the quality of the studies. Research Alerts should not be considered an endorsement of the findings. Readers are cautioned not to act on the results of single studies, but rather to seek bodies of evidence. It should also be noted that the Institute for Work & Health cannot provide full-text of articles listed in Research Alerts to individuals outside of the organization, as this violates copyright legislation.

Journal articles marked with an asterisk indicate an IWH scientist or adjunct scientist is included in the list of authors.

**\*Jones C, Hamilton C, Tugwell P, Grosskleg S, Hofstetter C, Horgan B, Hoens A, Beaton D. Implementing the PEIR Framework and PEIRS-22 to facilitate improved and sustainable patient engagement in OMERACT. *Seminars in Arthritis and Rheumatism*. 2025; 72:152704.**

<https://doi.org/10.1016/j.semarthrit.2025.152704> [open access]

**Abstract:** BACKGROUND: OMERACT (Outcome Measures in Rheumatology) is an international initiative focused on improving outcome measurement in rheumatology research, fostering collaboration among PRPs, clinicians, and researchers to develop Core Outcome Sets. The 22-item Patient Engagement In Research Scale (PEIRS-22) is a tool designed to measure the level of meaningful patient engagement and guide efforts towards improvement. AIM: 1) To describe the current profile of patient engagement at OMERACT using the scores generated by the PEIRS-22 and 2) to assess the validity of the PEIRS-22 within the OMERACT group of PRPs. METHODS: We administered the PEIRS-22 to assess the level of meaningful engagement of PRPs with OMERACT. We compared the scores with self-rated participant engagement, and asked open ended questions to investigate the validity of the tool in the OMERACT PRP population. RESULTS: Overall engagement was meaningful and correlated to self-reported level of engagement. However, there were components and items that were flagged as priorities for improvement (Convenience, Benefits and Team Environment, and specifically items PR11: I participated in making decisions about the project, T2: I was an equal partner in the research project team, and SU1: I received sufficient support to contribute to the project. CONCLUSION: This study highlights the validity of the PEIRS-22 within OMERACT and reveals satisfactory levels of meaningful PRP engagement. As OMERACT continues to learn and evolve, the PEIRS-22 will be integral in developing a structured and consistent approach to patient engagement

**\*Naik H, Zhu B, Er L, Sbihi H, Janjua NZ, Smith PM, et al. Health-related adverse work outcomes associated with post COVID-19 condition: a cross-sectional study. *BMJ Public Health*. 2025; 3(1):e001801.**

<https://doi.org/10.1136/bmjph-2024-001801> [open access]

**Abstract:** Introduction: Symptoms from post COVID-19 condition (PCC) can impair functioning in working-age adults. However, there is uncertainty about the relationship between PCC and work outcomes. This study aimed to assess health-related adverse work outcomes in individuals with a PCC history compared with others who had COVID-19. Methods: This was a cross-sectional study in which participants in British Columbia (BC) completed an online questionnaire. Participants comprised adults who tested positive for SARS-CoV-2 by PCR at least 2 years before questionnaire completion and were working age (18-64) at the time of infection. PCC status was determined by self-report. The health-related adverse work outcomes evaluated included change in occupation or employer, reduced workload, increased sick days compared with before COVID-19, early retirement and indefinite sick leave. Analyses were weighted to reflect the characteristics of individuals who had COVID-19 in BC. Propensity score overlap weighting was used to adjust for relevant sociodemographic and clinical covariates. Results: Among 1106 participants, 966 (87.3%) were employed when they contracted SARS-CoV-2 and included in analyses. Of these participants, 47.8% were female, the median age was 37 and 46.9% had a PCC history. Compared with other individuals who had COVID-19, those with a PCC history were more likely to have had a health-related adverse work outcome (46.5% vs 24.9%; adjusted OR (aOR) 2.6 (95% CI 1.7 to 4.0)) and reported a greater number of sick days in the first 2 years since contracting SARS-CoV-2 (adjusted mean difference 43 days (95% CI 20 to 65)). The risk of a health-related adverse work outcome was especially high in those with post-COVID-19 fatigue (aOR 4.6 (95% CI 2.7 to 7.9)), fever (aOR 4.0 (95% CI 1.7 to 9.6)), weakness (aOR 3.8 (95% CI 2.2 to 6.3)), palpitations (aOR 3.3 (95% CI 2.0 to 5.0)) and brain fog (aOR 3.2 (95% CI 2.0 to 5.0)). Conclusions: PCC is associated with health-related adverse work outcomes. This is an important consideration for clinicians, employers and health system leaders.

**Ahonen EQ, Winkler MR, Bosmans K, Gunn V, and Julia M. Could better-quality employment improve population health? Findings from a scoping review of multi-dimensional employment quality research and a proposed research direction. *American Journal of Industrial Medicine*. 2025; 68(3):225-249.**

<https://doi.org/10.1002/ajim.23695> [open access]

**Abstract:** BACKGROUND: Precarious employment, a specific part of the conceptual spectrum of employment quality (EQ), has been established as an important risk to individual and population health and well-being when compared to a standard employment circumstance. There remains a need, however, to explore whether and how EQ might be used as a tool to not only protect but also advance population health and well-being. METHODS: The purposes of this scoping review were to assess the analytic treatment of the multiple dimensions of EQ and the stances researchers take to characterize the state of knowledge of EQ that supports the idea that better EQ is a health-promoting factor. Quantitative, qualitative, and mixed-methods primary studies that included at least three of the seven conceptually-informed EQ dimensions were eligible. Studies were assessed for EQ dimensions represented, how dimensions were treated analytically, the pathogenic, ambivalent, or salutogenic stances used by investigators, and what each might tell us about how to leverage aspects of better-quality employment to improve population health. RESULTS: A total of 78 studies were

included; 54 of these treated EQ dimensions in an interrelated way. Of the analytically interrelated studies, none had an explicit salutogenic stance. Some evidence suggests that a handful of EQ types might present an equal or reduced risk of poor health than the standard employment relationship, frequently used as a historic gold standard. CONCLUSION: Research with a salutogenic stance might build our understanding of whether and how employment could be used to advance our collective well-being

**Corrin T, Cairney P, and Kennedy EB. The production and utility of evidence synthesis during the COVID-19 pandemic in Canada: perspectives of evidence synthesis producers. Evidence & Policy. 2025; 21(1):108-128.**

<https://doi.org/10.1332/17442648Y2024D000000034>

**Floeder A, Jones RM, and Arnold SF. Risk assessment methods in occupational health and hygiene: a scoping review. Annals of Work Exposures and Health. 2025; 69(2):120-131.**

<https://doi.org/10.1093/annweh/wxae095>

Abstract: BACKGROUND: There are a variety of risk assessment methods to evaluate occupational hazards in the field of industrial hygiene. With the development of emerging technologies in the workforce, the previously established risk assessment methods may need to be adapted or new methods developed to address the risk of new hazards. METHODS: A scoping review was conducted consistent with Preferred Reporting Items for Systematic Reviews and Meta-Analyses guidelines. Data was extracted and analyzed using a matrix method before undergoing a narrative synthesis. Risk assessment methods were classified as traditional and nontraditional. RESULTS: Seventy-nine articles were included in this scoping review, with 81% using traditional risk assessment methods and 19% using nontraditional methods. DISCUSSION: Among the nontraditional methods was control banding, with the most recent applications focused on nanomaterials. This approach, which was borne out of the need for a systematic approach for identifying potential health risks that required the use of engineering controls to be used safely, may have an important role in the area of emerging technologies, where the pace of technological innovation outstrips the rate at which health risks can be assessed and characterized. Risk assessment methods with the capacity to look at groups of similar chemicals and chemical mixtures are needed to address emerging hazards associated with emerging technologies

**Henstock L, Johnson R, Kinghorn P, Beach D, and Al-Janabi H. Why and how do workplaces invest in mental health and wellbeing? A systematic review and process tracing study. Social Science and Medicine. 2025; 366:117633.**

<https://doi.org/10.1016/j.socscimed.2024.117633> [open access]

Abstract: In recent years, investment in workplace mental health and wellbeing has grown. However, there is little understanding of how resource allocation decisions are made in such settings. To ensure evaluative research can support resource allocation, a process-based understanding of decision-making would be helpful. In phase one a systematic review of the literature on the implementation of workplace mental health and wellbeing schemes was conducted to draw insights on workplace resource allocation processes. In phase two an in-depth case study of a large company was conducted with interviews with those involved in resource allocation and wellbeing. Interviews were coded and analysed using descriptive and explanatory accounts. The findings from the review and case study were combined and developed into a causal process theory. This study shows that the stages in

mental health and wellbeing investment revolve around ensuring organisational buy-in, workforce investment, and continual evaluation. Further work is needed to explore the transferability of the resulting process theory across different types of workplaces. However, it is clear that the features of real world decision-making in workplaces present challenges and opportunities for the research community

**Linden P and Reibling N. Medicalisation of unemployment: an analysis of sick leave for the unemployed in Germany using a three-level model. *Work, Employment and Society*. 2024; 39(1):139-162.**

<https://doi.org/10.1177/09500170241244688> [open access]

Abstract: The study investigates whether sick leave for the unemployed is used to address problems of labour market integration – a process that can theoretically be conceptualised as the medicalisation of unemployment. Estimating a multilevel logistic regression model on a sample of N = 20,196 individuals from the German panel study Labour Market and Social Security (PASS) reveals that, on average, 18% of the unemployed are on sick leave due to poor health. However, given a comparable state of health, the probability increases for men, older individuals and those with lower educational levels. These findings are crucial as they reveal a dual role of sick leave in a context with limited access to disability pensions: as a protective measure for sick, unemployed individuals and as medicalisation of unemployment by excluding those who face non-medical barriers to labour market integration.

**Marin-Berges M, Villa-Berges E, Lizana PA, Gomez-Bruton A, and Iguacel I. Depression, anxiety and stress in taxi drivers: a systematic review of the literature. *International Archives of Occupational and Environmental Health*. 2025; 98(1):135-154.**

<https://doi.org/10.1007/s00420-024-02117-4> [open access]

Abstract: PURPOSE: Mental health is a global public health challenge, with mental disorders being a major cause of morbidity. Particularly, taxi drivers face unique challenges related to long working hours, economic instability, and hazardous working conditions. To summarise the existing scientific literature on mental disorders in taxi drivers and identify associated variables. METHODS: PubMed, Scopus and Web of Science databases were examined from inception to April 2024 following the PRISMA guidelines. Two authors independently selected original studies. We included observational studies published in English or Spanish or Portuguese, which assessed the mental health of taxi drivers. The Quality Assessment Tool for Observational Cohort and Cross-Sectional Studies of the National Heart, Lung, and Blood Institute (NHBLI) was used to assess the quality of the articles. RESULTS: From an initial pool of 618 studies, eleven met the inclusion criteria and were included in the present systematic review. The findings indicate a considerable prevalence of mental health issues among taxi drivers in comparison to the general population. The prevalence of depression ranged from 14.3 to 60.5% and were driven by a number of factors, including perceived mental strain, lack of respect from operators, a stressful personal life, insufficient sleep, poor working conditions, work-family conflict and low work engagement. Anxiety was reported by 24.1-47% of drivers, with a lack of sufficient sleep being identified as a primary contributing factor. The prevalence of stress ranged from 19 to 55%, with key contributing factors including discrimination, smoking, limited language proficiency, sleep disorders and younger age. Furthermore, 33% of drivers displayed elevated levels of psychological distress, frequently linked to traumatic experiences and occupational

hazards. CONCLUSIONS: Rates of depression, anxiety, stress and psychological distress are higher in taxi drivers than in general population, therefore prevention strategies should target this group. SYSTEMATIC REVIEW REGISTRATION: PROSPERO registration no. CRD42023360073

**Neis B, Macpherson RA, Shan D, Small C, Ochs C, Tamburic L, et al. Injury and return to work among maritime workers in British Columbia, Canada. *New Solutions*. 2025; [epub ahead of print].**

<https://doi.org/10.1177/10482911251316325> [open access]

Abstract: Maritime occupations encompass seafaring, fishing, marine aquaculture, and longshore work. These non-standard occupations tend to be hazardous with high injury rates. They are associated with varying levels of seasonality, shift work, geographic mobility, and different types of remuneration, posing unique challenges when recovering from work-related injury and illness. Occupational health and safety is under-researched in these sectors. Furthermore, little research exists on return to work (RTW) after injury among maritime workers. This paper presents findings from a mixed methods research program designed to provide insight into injury, compensation and RTW experiences among maritime workers in the Canadian province of British Columbia (BC). Research methods include the analysis of provincial workers' compensation data, data from an anonymous online survey of injured/ill BC maritime workers and from semi-structured interviews with injured workers and key informants. Analysis of workers' compensation data shows high rates of serious injuries, longer disability duration, and high rates of deemed RTW, particularly in fishing. Survey findings suggest a relatively low percentage of workers file claims for workers' compensation to WorkSafeBC. Interview data highlight some of the challenges that may explain under-reporting, longer disability duration, and relatively poor RTW outcomes. Policy relevant concerns and areas for future research relevant to understanding and addressing some of the identified RTW challenges associated with these sectors are presented

**Ronconi L, Anchorena J, and Paz J. The incidence and severe consequences of occupational injuries among informal workers in a developing country. *International Journal of Occupational Safety & Ergonomics*. 2025; [epub ahead of print].**

<https://doi.org/10.1080/10803548.2025.2454152>

Abstract: This article uses novel microdata to estimate the prevalence of occupational injuries among informal workers in a developing country with a segmented labour market like Argentina, and analyses their socio-economic consequences, exploring the heterogeneity according to the formality status of the worker. The results indicate that the prevalence of injuries is roughly similar between informal and formal workers. However, the socio-economic consequences are substantially more severe for informal workers and their families. These consequences include: a reduction in consumption of basic goods and services; and the need for household members - including school-age children and older people - to search for work to compensate for the income drop resulting from the injured worker

**Santos MFD, Siqueira JS, Feijo FR, and Fernandes RCP. Mental disorders related to psychosocial factors among delivery workers: results of a web survey in Brazil. *International Archives of Occupational and Environmental Health*. 2025; 98(1):99-107.**

<https://doi.org/10.1007/s00420-024-02115-6>

Abstract: PURPOSE: The number of delivery workers (DW) has grown significantly with the rise of the platform economy. Evidence suggests that the working conditions faced by these workers are

precarious, however, less is known about the health implications among workers. This study aims to investigate the prevalence of mental disorders (MD) and occupational factors related to this condition among DW. Methods: This is a cross-sectional study, a web survey with DW in Brazil. Data collection lasted four months, starting in February 2022. Anxiety, panic disorder, and depression were measured based on self-reported medical diagnosis. Those with at least one of the three diagnoses were considered to have MD. Cox regression analysis, presenting prevalence ratios, showed the factors related to MD. Results: A total of 563 DW participated in the study. The overall prevalence of MD was 25.6%. Lack of support from the company (PR = 1.71), accelerated work pace (PR = 1.55) and experience of conflicts with company customers (PR=1.48) were psychosocial factors associated to MD. In addition, working in the South, Southeast or Central-West regions is related to a higher prevalence of MD (PR = 2.10). Conclusions: The high prevalence of MD and its association with psychosocial stressors at work require regulation of the practices of companies operating in the platform economy, aiming to control the intensification of work. In addition to health and social security policies, it is crucial to ensure fair remuneration to reduce the pace of work in a non-strenuous workday, protecting workers from conflicts with dissatisfied customers of the company.

**Shao Y, Almgberg KS, Friedman LS, Cohen RA, and Go LHT. Drillers and bulldozer operators have experienced exceptionally high exposures to respirable crystalline silica in US surface coal mines. Occupational and Environmental Medicine. 2025; 81(12):622-627.**

<https://doi.org/10.1136/oemed-2024-109689>

Abstract: Introduction: Previous studies suggest respirable crystalline silica (RCS) is an important driver of resurgent pneumoconiosis among US coal miners. Although greater attention has been focused on dust exposures in underground coal miners, surface miners are also at risk of severe disease. This study explores RCS exposure in this population. Methods: We analysed 91 950 respirable quartz samples from 4127 US surface coal mines from 1982 to 2023. We calculated the geometric mean of respirable quartz concentration for each mine-year combination. Then, for each calendar year, we averaged the geometric means across all mines. We used generalised estimating equation models with a natural logarithm link function and Poisson distribution to evaluate the marginal effects of mine characteristic variables on the mass concentration of respirable quartz based on individual dust sample results. Results: Drillers and bulldozer operators had annual mean respirable quartz exposures as high as 0.58 and 0.32 mg/m<sup>3</sup>, respectively, while other occupations combined had exposure of 0.08 mg/m<sup>3</sup>. The mean mine-level respirable quartz mass concentrations decreased substantially over time for all three occupation groups. Drillers or bulldozer operators, mine location in Central Appalachia and lack of a mine safety committee were predictive of higher respirable quartz mass concentrations. Conclusions: These data demonstrate exceptionally high RCS overexposures among certain groups of surface coal miners, particularly drillers and bulldozer operators in the 1980s and 1990s. Despite recent improvement in RCS levels, these data underscore the importance of continued medical surveillance of current and former surface coal miners.

**Talebiazar N, Anzali BC, Abbasi M, Azizi N, Goli R, Faraji N, et al. Does mindfulness-based stress reduction training have an impact on the occupational burnout and stress experienced by nurses? A randomized controlled trial. International Archives of Occupational and Environmental Health. 2025; 98(1):1-11.**

<https://doi.org/10.1007/s00420-024-02078-8>

**Abstract:** Background: In an effort to combat burnout, a study investigates Mindfulness-Based Stress Reduction (MBSR) training for nurses. The goal is to reduce stress and improve job satisfaction, ultimately enhancing patient care. These findings may inspire the development of mindfulness-based support systems for healthcare professionals to promote overall well-being in the workplace. **Materials and methods:** A single-blinded, randomized controlled trial with 60 emergency medical center nurses was conducted to assess the effectiveness of an eight-session MBSR program in reducing stress and burnout. The randomization process, utilizing sealed envelopes, ensured unbiased allocation to intervention or control groups. The training program included group sessions focused on meditation, yoga, and discussions, with participants receiving educational materials and CDs for home practice. Collected data included demographics, Maslach Burnout Inventory, and Occupational Stress Questionnaire results. Statistical analysis, utilizing SPSS version 21, featured Kolmogorov-Smirnov, Mann-Whitney U, and Wilcoxon tests to evaluate outcomes. **Results:** Following MBSR Training, the intervention group displayed statistically significant differences in all occupational stress subscales compared to the control group ( $P < 0.05$ ). Post-intervention, the intervention group also exhibited significant differences in burnout subscale scores ( $P < 0.001$ ) compared to the control group. **Conclusion:** MBSR can boost resilience and job satisfaction, enhancing patient care. Healthcare organizations should integrate MBSR programs for nursing staff well-being and combat stress and burnout. Research should probe long-term impacts and effective delivery methods for sustained stress relief in nursing. **Trial registration:** This study has registered in Iranian Registry of Clinical Trials by the number of IRCT20131112015390N5 on Jun 2022.

**Vigoro L, Caffaro F, Tronci M, and Fagnoli M. Ergonomics and design for safety: a scoping review and bibliometric analysis in the industrial engineering literature. Safety Science. 2025; 185:106799. <https://doi.org/10.1016/j.ssci.2025.106799>**

**Wang Y, Callison K, Hernandez JH, and Stoecker C. Impacts of state COVID-19 vaccine mandates for health care workers on health sector employment in the United States. American Journal of Public Health. 2025; 115(3):344-348. <https://doi.org/10.2105/AJPH.2024.307906> [open access]**

**Abstract:** Objectives. To assess the impact of state COVID-19 vaccine mandates for health care workers (HCWs) on health sector employment in the United States. **Methods.** Using monthly state-level employment data from the Quarterly Census of Employment and Wages between January and October 2021, we employed a partially pooled synthetic control method that accounted for staggered mandate adoption and heterogeneous treatment effects. We conducted analyses separately for the 4 health care subsectors-ambulatory health care services, hospitals, nursing and residential care, and social assistance-with an additional analysis of 2 industry groups-skilled nursing care and community care for the elderly-under the nursing and residential care subsector. We further explored possible heterogeneous impacts according to the test-out option availability. **Results.** Mandate impact estimates were statistically indistinguishable from zero. Results further ruled out a mandate-associated decrease in employment larger than 2.1% of premandate employment levels for the 6 health care domains examined and for states with no test-out option. **Conclusions.** State COVID-19 vaccine mandates for HCWs were not found to be associated with significant adverse impacts on health sector employment even in states without a testing alternative to vaccination. The findings support vaccine mandates as a viable preventive measure without material disruption to the health

care workforce, including in times of public health emergencies. (Am J Public Health. 2025;115(3):344-348. <https://doi.org/10.2105/AJPH.2024.307906>)

**Missed an issue?** Catch up on previous Research Alerts available on the IWH website [www.iwh.on.ca/journal-articles/research-alerts](http://www.iwh.on.ca/journal-articles/research-alerts)