

**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.

**Alencar MDCB, da Silva NR, and Serranheira F. Musculoskeletal pain and risk factors in office workers versus teleworkers: a systematic review. *Work*. 2025; 80(3):974-997.**

<https://doi.org/10.1177/10519815241289675>

**Abstract:** Background Musculoskeletal pain is common in office workers and teleworkers, but the causes remain not enough visible in society. Objective This systematic review examines main risk factors for work-related musculoskeletal disorder (WRMSD) in office workers versus teleworkers. Methods PubMed/ Medline, Scopus and Web of Science databases were searched using keywords based on the theme, CoCoPop was used to define the inclusion criteria, also used the PRISMA guidelines, the QuADs tools to evaluate the quality of the studies, risk of bias analyses was done with the Navigation Guide for Systematic Reviews in environment and occupational health. Results Of 468 studies identified, 17 were included in the final selection. Both office workers and teleworkers have working conditions at risk of developing or aggravating MSD, but results highlighted the poor teleworkers workplaces, ICT equipment's as laptops, psychosocial and organizational demands that increased the working time and family conflicts, and environmental risk factors associated to teleworkers increased WRMSD symptoms/pain. Conclusions This review underline the lack of appropriate working conditions at home and that is a contribute for increasing WRMSD pain in teleworkers. Employers should give more importance ensuring ergonomic workplace at teleworkers home, including also worker's organizational companies support

**Au LS, Qu L, Nielsen J, Ge Z, Gurrin LC, Mol BW, et al. Using artificial intelligence to semi-automate trustworthiness assessment of randomized controlled trials: a case study. *Journal of Clinical Epidemiology*. 2025; 180:111672.**

<https://doi.org/10.1016/j.jclinepi.2025.111672> [open access]

**Abstract:** BACKGROUND AND OBJECTIVE: Randomized controlled trials (RCTs) are the cornerstone of evidence-based medicine. Unfortunately, not all RCTs are based on real data. This serious breach of research integrity compromises the reliability of systematic reviews and meta-analyses, leading to misinformed clinical guidelines and posing a risk to both individual and public health. While methods to detect problematic RCTs have been proposed, they are time-consuming and labor-intensive. The use of artificial intelligence large language models (LLMs) has the potential to accelerate the data collection needed to assess the trustworthiness of published RCTs. METHODS: We present a case study using ChatGPT powered by OpenAI's GPT-4o to assess an RCT paper. The case study focuses on applying the trustworthiness in randomised controlled trials (TRACT checklist) and automating data table extraction to accelerate statistical analysis targeting the trustworthiness of the data. We provide a detailed step-by-step outline of the process, along with considerations for potential improvements. RESULTS: ChatGPT completed all tasks by processing the PDF of the selected publication and responding to specific prompts. ChatGPT addressed items in the TRACT checklist effectively, demonstrating an ability to provide precise "yes" or "no" answers while quickly synthesizing information from both the paper and relevant online resources. A comparison of results generated by ChatGPT and the human assessor showed an 84% level of agreement of (16/19) TRACT items. This substantially accelerated the qualitative assessment process. Additionally, ChatGPT was able to extract efficiently the data tables as Microsoft Excel worksheets and reorganize the data, with three out of four extracted tables achieving an accuracy score of 100%, facilitating subsequent analysis and data verification. CONCLUSION: ChatGPT demonstrates potential in semiautomating the trustworthiness assessment of RCTs, though in our experience this required repeated prompting from the user. Further testing and refinement will involve applying ChatGPT to collections of RCT papers to improve the accuracy of data capture and lessen the role of the user. The ultimate aim is a completely automated process for large volumes of papers that seems plausible given our initial experience

**Bishop M, Park S, Ko E, Koc M, Zhou K, and Rumrill P. Employment accommodation experiences among American workers with multiple sclerosis: a mixed-method analysis. *Journal of Vocational Rehabilitation*. 2025; 62(2):141-153.**

<https://doi.org/10.1177/10522263241310070>

**Gilbert FJ, Palmer J, Woznitza N, Nash J, Brackstone C, Faria L, et al. Data and data privacy impact assessments in the context of AI research and practice in the UK. *Frontiers in Health Services*. 2025; 5:1525955.**

<https://doi.org/10.3389/frhs.2025.1525955> [open access]

**Abstract:** Artificial intelligence (AI) projects in healthcare research and practice require approval from information governance (IG) teams within relevant healthcare providers. Navigating this approval process has been highlighted as a key challenge for AI innovation in healthcare by many stakeholders focused on the development and adoption of AI. Data privacy and impact assessments are a part of the approval process which is often identified as the focal point for these challenges. This perspective reports insights from a multidisciplinary workshop aiming to characterise challenges and explore

potential solutions collaboratively. Themes around the variation in AI technologies, governance processes and stakeholder perspectives arose, highlighting the need for training initiatives, communities of practice and the standardization of governance processes and structures across NHS Trusts

**Gomez V, Ehrmann Feldman D, Cote D, Kairy D, Laberge M, Leon A, et al. Physiotherapy experiences of injured immigrant workers in Quebec: an intersectional perspective. *Disability & Rehabilitation*. 2025; 47(9):2338-2348.**

<https://doi.org/10.1080/09638288.2024.2393802>

Abstract: PURPOSE: Immigrant workers are more likely to suffer work-related injuries compared to native-born Canadians. Their physical rehabilitation usually involves physiotherapy. This study sought to better understand the experiences of injured immigrant workers receiving compensation and physiotherapy treatments. MATERIALS AND METHODS: We conducted a qualitative study using an interpretive descriptive methodology. Semi-structured interviews were completed with 10 compensated immigrant workers about the physiotherapy services they received. Transcripts were analyzed thematically and with an intersectional lens. RESULTS: Two major themes were identified: 1) complex pathways to physiotherapy, and 2) key pillars of physiotherapy experiences. The first theme demonstrates that a lack of familiarity with the health and compensation systems, delayed access to physiotherapy, and cumulative burdens complicate the care of immigrant workers. The second theme shows that moral/emotional support, pain relief, and the recognition of sociocultural beliefs and fears are key aspects to improving the experiences of care for these workers. CONCLUSIONS: This study offers new insights into physiotherapy in the context of a work injury, which may help physiotherapists adapt care to the complex needs of immigrant workers. The intersectional lens used in the analysis offers interesting ways of accounting for the multiple social identities of these workers

**Jones MD, Hansford HJ, Bastianon A, Gibbs MT, Gilanyi YL, Foster NE, et al. Exercise adherence is associated with improvements in pain intensity and functional limitations in adults with chronic non-specific low back pain: a secondary analysis of a Cochrane review. *Journal of Physiotherapy*. 2025; 71(2):91-99.**

<https://doi.org/10.1016/j.jphys.2025.03.004> [open access]

Abstract: QUESTION: What is the association between exercise adherence and the effects of exercise on pain intensity and functional limitations in adults with chronic non-specific low back pain (CNSLBP)? DESIGN: Systematic review with meta-analysis. PARTICIPANTS: Adults with CNSLBP. INTERVENTION: Randomised controlled trials of exercise compared with no exercise (eg, usual care, placebo/sham or another conservative treatment). Adherence to exercise must have been reported. OUTCOME MEASURES: Pain intensity and functional limitations. RESULTS: This study included 46 trials with 56 exercise groups. High exercise adherence (80 to 100%) was associated with reduced pain intensity (0 to 100 scale) (MD -14.32, 95% CI -18.61 to -10.03, low certainty) and functional limitations (0 to 100 scale) (MD -8.08, 95% CI -10.68 to -5.49, low certainty). Moderate exercise adherence (60 to 79%) was not associated with reduced pain intensity (MD -4.53, 95% CI -9.39 to 0.34, very low certainty) or functional limitations (MD -2.75, 95% CI -6.00 to 0.51, very low certainty). Low exercise adherence (< 59%) was associated with reduced pain intensity (MD -5.33, 95% CI -10.00 to -0.66, low certainty) and functional limitations (MD -4.43, 95% CI -7.14 to -1.72, moderate certainty). Compared with low adherence, additional differences in outcomes for moderate and high adherence were

mostly negligible. CONCLUSION: Higher exercise adherence is associated with larger improvements in clinical outcomes in adults with CNSLBP, although overall differences are small compared with lower adherence. Other factors besides adherence between the trials and exercise programs could explain these results. Further research is needed to determine the causal effect of exercise adherence on outcomes in adults with CNSLBP. REGISTRATION: PROSPERO CRD42023447355 and Open Science Framework <https://osf.io/7p6dw/>

**Karr JE, Rippey CS, Hubert TJ, Stein MB, Adams TG, and Pietrzak RH. Traumatic brain injury in US veterans: prevalence and associations with physical, mental, and cognitive health. Archives of Physical Medicine and Rehabilitation. 2025; 106(4):537-547.**

<https://doi.org/10.1016/j.apmr.2024.11.010>

Abstract: OBJECTIVE: To examine the prevalence of traumatic brain injury (TBI) in the US veteran population, and physical, mental, and cognitive health conditions associated with TBI. DESIGN: Retrospective cohort study. SETTING: A nationally representative sample of US military veterans surveyed in 2019-2020. PARTICIPANTS: Veterans with probable TBI (n=943; M=58.8 years, SD=16.4; 75.9% non-Hispanic White) and without probable TBI (n=3,033; M=63.3 years, SD=15.3; 78.6% non-Hispanic White) were categorized based on a 2-item modified Veterans Health Administration TBI screen or self-reported health professional diagnoses of concussion/TBI. INTERVENTIONS: Not applicable. MAIN OUTCOME MEASURE(S): Self-reported health professional-diagnosed physical and cognitive health conditions, disability with basic and instrumental activities of daily living (ADLs), positive screens for posttraumatic stress disorder (PTSD), major depressive disorder, anxiety disorder, alcohol use disorder, or drug use disorder, and current suicidal ideation or prior suicide attempts. RESULTS: Among the full sample, 24.5% (95% confidence interval: 22.7, 26.3) had probable TBI. In adjusted analyses, probable TBI was independently associated with greater odds of rheumatoid arthritis (odds ratio [OR]=2.06), chronic pain (OR=1.87), kidney disease (OR=1.81), pulmonary disease (OR=1.74), arthritis (OR=1.65), migraine (OR=1.59), sleep disorders (OR=1.57), and osteoporosis or osteopenia (OR=1.51). Veterans with probable TBI also had higher odds of mild cognitive impairment (OR=4.53) and disability with ADLs (OR=2.18) and instrumental ADLs (OR=1.98), although ADL disability was explained by other physical health conditions. Probable TBI was associated with higher odds of probable current anxiety disorder (OR=2.82), major depressive disorder (OR=2.17), suicidal ideation (OR=1.78), PTSD (OR=1.72), drug use disorder (OR=1.54), and alcohol use disorder (OR=1.47). CONCLUSIONS: Nearly 1-in-4 US veterans screen positive for probable TBI, which was associated with several physical and mental health conditions that adversely affect health and functioning. Results underscore the importance of multidisciplinary interventions that concurrently target the unique physical, mental, cognitive, and functional health needs of this population

**Maharani C, Casteel C, Rohlman D, Afifi R, Baker K, and Fethke N. "I am responsible": perceptions of employees on health and safety program implementation in small and medium sized businesses in Indonesia. Work. 2025; 80(3):1181-1190.**

<https://doi.org/10.1177/10519815241290284>

Abstract: Background Prior research conducted in the small bag manufacturing sector in Indonesia reported that occupational injuries occurred almost every month, with some workers reporting severe injuries that led to their fingers being amputated. Another study mentioned that the food manufacturing sectors tend to be more focused on improving their production activities than on

paying attention to protecting their workers. Despite these conditions, employees are commonly seen by the owners as being responsible for their own safety at the workplace. Additionally, research examining how employees perceive occupational safety and health (OSH) and the current OSH programming available in SMB food and bag manufacturing in Indonesia is still limited. Objective This study aims to identify the perceptions among SMBs employees on OSH implementation in small and medium sized food and bag manufacturing businesses in Indonesia. Methods This qualitative study utilized in-depth interviews with employees of small and medium sized food and bag manufacturing businesses located in Bogor City, West Java Province. Results Occupational injuries happened to employees in almost all the businesses participated in the study. However, almost all the employees are not covered by insurance and accounted themselves to be responsible for both the injuries and to have the insurance. The employees often have casual or 'family-like' relationships with the business owners. Conclusions The 'family-like' relationship between business owners and employees in small and medium sized businesses can contribute to employees taking the responsibility for injuries that occur to themselves or their colleagues

**Mayell S, McLaughlin J, Hennebry J, Sanchez GV, Goswami P, and Hanley J. The point of no return? Impediments to return to work for injured migrant agricultural workers in two Canadian provinces. *New Solutions*. 2025; 35(1):22-32.**

<https://doi.org/10.1177/10482911251314149> [open access]

Abstract: Migrant agricultural workers employed through Canada's Temporary Foreign Worker Program face serious occupational health and safety hazards, with compounded difficulties in accessing workers' compensation (WC) if they are sick or injured by the job. Little is known, however, about their ability to return to work (RTW) upon recovery—a fundamental right included in the conception of WC, but complicated by their restrictive work permits and precarious immigration status. Based on interviews with injured migrant workers in two Canadian provinces (Quebec and Ontario), our research suggests that workers' RTW process is anything but straightforward. This article highlights three key issues—pressure to return to work prematurely, communication and bureaucratic challenges with WC agencies, and impacts of injury/illness and failure to return to work on workers' long-term well-being. Consequences and opportunities for reform are discussed

**Mensah A, Nyberg A, Wennberg P, and Toivanen S. Effort-reward imbalance and problem drinking among workers: differences in gender and the gender composition of industries and main job activities in a prospective cohort study from Sweden. *Social Science and Medicine*. 2025; 372:117911.**

<https://doi.org/10.1016/j.socscimed.2025.117911> [open access]

Abstract: Effort-reward imbalance (ERI) is a form of psychosocial work stress known to contribute to health problems among working populations. Given that men and women tend to work in different industries and job activities, the labour market remains gender segregated. This study investigated the relationships between effort, reward, ERI, overcommitment and problem drinking in a sample of the Swedish working population over time and simultaneously explored whether these relationships differ by gender and the gender composition of industries and main job activities. Data were drawn from the Swedish Longitudinal Occupational Survey of Health, collected biennially from 2010 to 2022, comprising 18017 workers. Work stress and problem drinking were measured with the ERI questionnaire and the Cut-down-Annoyed-Guilty-Eye opener instrument, respectively. A logistic-

generalised estimating equation was used to perform the analysis. The results showed that higher scores of all the components of the ERI-model are significantly associated with problem drinking ( $p < 0.01$ ). However, these associations did not significantly differ by gender and the gender composition of industries and main job activities ( $p > 0.10$ ). Also, overcommitment did not significantly moderate the association between ERI and problem drinking ( $p > 0.10$ ). Our findings demonstrated that all the components of the ERI-model contribute to problem drinking in working populations and highlight the need for organisations and stakeholders to consider gender as a social structure when developing strategies and interventions aimed at improving work stress and reducing problem drinking

**De Moortel D, Balogh R, Engels M, and Vanderleyden J. Employment quality and mental health in Germany: the mismatch of low employment quality with work and family values by gender. *Social Science and Medicine*. 2025; 371:117906.**

<https://doi.org/10.1016/j.socscimed.2025.117906> [open access]

Abstract: Empirical evidence on whether low-quality employment is detrimental to workers' mental health is mostly cross-sectional and empirical evidence on pathways linking employment quality (EQ) to mental health remains scarce. Consequently, this study examines subsequent mental health associations of low-quality employment. Associations between EQ and mental health are investigated through a typology of employment arrangements. This study also investigates whether the relation between EQ types and subsequent mental health is different for workers with varying intensities of work and family values (i.e., importance of success at work and of having children, respectively) across genders. Using a large representative German panel dataset and Latent Class Cluster Analysis, EQ types are built and linked to mental health two years later. We assess two- and three-way interactions between EQ types and values, and between EQ types, gender and values, respectively. We found six EQ types: SER-like, precarious unsustainable, precarious full-time, SER-light, portfolio and protected part-time employment. Controlled for socio-demographic characteristics, precarious unsustainable employment for men and precarious full-time employment for women were associated to lower mental health after two years, compared to SER-like employment. Although protected part-time employment related to worse mental health for those with moderate to strong work and family values, compared to those with mild values, the interactions show an unclear pattern of the moderating role of values for the relation between EQ and subsequent mental health, for both men and women. This study should be replicated in other countries to confirm similar associations

**Rajabi F, Jahangiri M, Alimohammadlou M, and Kamalinia M. Identify and classify common errors, antecedents, outcomes, and mitigation strategies in qualitative and semi-quantitative workplace safety risk management: integrating grounded theory and systematic literature review. *Safety Science*. 2025; 187:106851.**

<https://doi.org/10.1016/j.ssci.2025.106851>

**Shiri R, Poutanen J, Harma M, Ervasti J, and Haukka E. A meta-analysis of unemployment risk factors for middle-aged workers. *Scandinavian Journal of Work, Environment & Health*. 2025; 51(3):135-145.**

<https://doi.org/10.5271/sjweh.4216> [open access]

Abstract: OBJECTIVE: This systematic review and meta-analysis aimed to identify risk factors for unemployment among middle-aged workers. METHODS: Searches were carried out in PubMed, Web

of Science and Google Scholar until November 2024, focusing on observational longitudinal studies that involved workers aged 40-64 years. Three reviewers evaluated the quality of the studies. A random-effects meta-analysis was employed, and heterogeneity and publication bias were assessed. RESULTS: Out of 10 432 reports, 19 longitudinal studies (N=374 585 participants) were included in the review. The meta-analysis identified multiple risk factors associated with unemployment, including suboptimal self-rated general health [hazard ratio (HR) 1.44, 95% confidence interval (CI) 1.21-1.70], mental health conditions [HR 1.48, 95% CI 1.30-1.68, particularly depressive symptoms (HR 1.42, 95% CI 1.14-1.76)], low job control (HR 1.30, 95% CI 1.17-1.43), and lack of physical activity (HR 1.56, 95% CI 1.13-2.15). Additionally, a higher risk of unemployment was observed among individuals with 12 years of education (HR 1.17, 95% CI 1.00-1.36), those who are unmarried, separated, or widowed (HR 1.43, 95% CI 1.14-1.79), and immigrants (HR 1.26, 95% CI 1.11-1.44). Age, gender, smoking, alcohol consumption, musculoskeletal disorders, cardiovascular and respiratory diseases, digestive diseases, diabetes, neoplasm, and limitations in daily activities did not increase unemployment risk. CONCLUSIONS: This meta-analysis highlights the impact of mental health conditions, low job control, and lack of leisure-time physical activity on unemployment risk among middle-aged workers. Interventions aimed at improving mental health and increasing job control and physical activity could reduce unemployment risk

**Varianou-Mikellidou C, Nicolaidou O, Vogazianos P, Boustras G, Dimopoulos C, and Mikellides N. Analysis of fall accidents at work: the case of Cyprus (2010-2019). Safety Science. 2025; 187:106871. <https://doi.org/10.1016/j.ssci.2025.106871>**

**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)