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

***Van Eerd D, Ragnathan S, Irvin E, Varickanickal J, Tompa E, McElheran M, et al. Workplace programs to reduce post-traumatic stress injuries work disability: first responder experiences. *Journal of Occupational Rehabilitation*. 2025; [epub ahead of print].**

<https://doi.org/10.1007/s10926-025-10299-y> [open access]

Abstract: PURPOSE: First responders (FR-police, firefighters, paramedics) are exposed to trauma which can result in post-traumatic stress injuries (PTSI). Despite a lack of strong evidence on interventions to address PTSI work disability, workplace PTSI programs and policies are necessary to prevent work disability. The study objective was to examine experiences and perspectives about workplace programs, policies, and experiences related to the prevention of PTSI work disability among FR in Alberta, Canada. METHODS: This qualitative study collected the perspective of police members, firefighters, and paramedics in Alberta, Canada regarding current workplace PTSI programs and policies. Qualitative interview data underwent descriptive thematic analysis. RESULTS: Interviews were conducted with 47 FR members from police (16), fire (16), and paramedic (15) services who shared their experience with PTSI and workplace programs and policies. Three key themes emerged: improving culture, programs under development, and trusted communication. Three additional themes related to recommendations to improve programs and policies in the workplace were also identified: streamlined processes, better resources, and continue to reduce stigma. The themes and recommendations from participants provide practical information about how programs and policies can be improved. CONCLUSION: Interviews provided rich descriptions of current FR workplace PTSI practices and policies. While participants noted that awareness about PTSI and the culture of FR workplaces has improved, more needs to be done. Paramount were recommendations regarding the need for streamlined processes and better resources to reduce PTSI work disability. Study findings suggest that the development and implementation of workplace PTSI programs have a positive

impact on FR organizations and on the mental wellbeing of the FR workforce. Future research should examine FR workplace program and policy development as well as implementation

Avila S, Hao Y, Bani-Fatemi A, Howe A, and Nowrouzi-Kia B. Impacts of arthritis on work performance, functioning and activities of daily living using the Canadian Community Health Survey. *Work*. 2025; 81(1):2167-2179.

<https://doi.org/10.1177/10519815241303341>

Abstract: Background: Individuals with arthritis often face significant challenges in their activities of daily living and work performance, resulting in substantial effects on both their personal and professional lives. Objective: This study aims to determine whether workers with arthritis within the Canadian working-age population are more or less likely to miss work, sustain injuries, or experience activity limitations compared to those without arthritis. Methods: The analysis utilized data from the Canadian Community Health Survey, focusing on employed individuals over 20 from two datasets: 2015-2016 (n = 107,705) and 2017-2018 (n = 112,947). Logistic regression examined occupational health factors, while bivariate analyses via chi-squared tests ($p < 0.01$) filtered variables and Tukey's HSD was used for post hoc analysis ($p < 0.05$). Multinomial models addressed complex responses, and Wald's test compared differences between males and females. Results: Individuals with arthritis (n = 27,720) were more likely to miss work, experience difficulties in daily functioning and report injury compared to their non-arthritis counterparts. Women with arthritis were also more likely to face difficulties in daily functioning and report joblessness. Men with arthritis were more likely to report work absences but less likely to report injury compared to both women and non-arthritis men. Conclusion: Despite individuals with arthritis being heavily impacted in terms of functionality, there is a disconnect between accommodations provided and usage. Further research on inclusive accommodations (e.g., ergonomic tools and equipment, flexible work arrangements) and self-management strategies that can account for the problems faced by individuals with arthritis need to be established.

Bailey C, Madden A, and Lips-Wiersma M. Experiencing meaningful work through worthwhile contributions: a critical discourse analysis. *Human Relations*. 2025; 78(5):550-578.

<https://doi.org/10.1177/00187267241255581> [open access]

Abstract: Why do individuals find their work meaningful and what is the role of worthwhile contributions in this experience? We undertake an analysis of accounts related by individuals working as nurses, creative artists and lawyers in which they explain why they find their work meaningful. Drawing on the traditions of critical discourse and narrative analysis, and informed by French pragmatic sociology, we move beyond a focus on what is said to consider how accounts are structured in explanations of meaningfulness. We find meaningfulness to be discursively constituted in the judgement that work makes a worthwhile contribution to others or wider society. We add theoretically to the literature on meaningful work, first, by revealing worthwhile contributions to be a complex, three-fold evaluation comprising the value attached by the individual to their contribution, validation from others that aligns with the individual's own evaluation concerning the worth of the contribution and the individual's self-efficacy belief that they are able to make the contribution. Second, we build bridges between hitherto disconnected branches of the meaningful work literature

grounded in positive psychology on the one hand and moral worth on the other by showing how judgements of worth are fundamental to the experience of meaningfulness

Casjens S, Griemsmann S, Hosbach I, Wechsler K, Weber B, Clarenbach C, et al. Changes in musculoskeletal pain among computer workers when working from home. *Journal of Occupational & Environmental Medicine*. 2025; 67(5):363-370.

<https://doi.org/10.1097/JOM.0000000000003337> [open access]

Abstract: OBJECTIVES: This study evaluated the impact of increased working from home on musculoskeletal pain before and after the SARS-CoV-2 pandemic. METHODS: In an online survey (September 2023-April 2024), pain was rated on a numeric rating scale. The impact of working from home and covariates on new pain onset and exacerbation was modeled using logistic regression analyses. RESULTS: Of 1064 participating computer workers, 968 were working from home. Working from home compared to office-only work showed a trend of increasing pain. Longer remote working hours and poorer workstation setups also increased the risks for pain (eg, new neck or upper back pain; odds ratio 2.02, 95% confidence interval 1.08-3.76). CONCLUSIONS: Preventing musculoskeletal pain should involve improving remote workstation ergonomics, promoting healthy lifestyles, participation in regular occupational health screenings, and supporting employees with anxiety or depression symptoms

Elkefi S, Sabra R, Marie Hajjar J, Idriss-Wheeler D, and Aref E. The role of participatory ergonomics in supporting the safety of healthcare workers: a systematic review. *Theoretical Issues in Ergonomics Science*. 2025; 26(3):257-303.

<https://doi.org/10.1080/1463922X.2024.2373439>

Glass DC, Gwini SM, Del Monaco A, Fritschi L, Abramson MJ, Sim MR, et al. Mortality and cancer incidence among Queensland coal mine workers: a retrospective cohort. *Occupational and Environmental Medicine*. 2025; 82(3):120-127.

<https://doi.org/10.1136/oemed-2024-109549> [open access]

Abstract: Objectives: To quantify mortality and cancer incidence among Queensland coal mine workers. Methods: A cohort of coal mine workers from Queensland was linked to Australian national death and cancer registries for the period 1983-2020. Standardised mortality (SMR) and cancer incidence (SIR) ratios were calculated for men and women compared with Australian rates. Accidental deaths, suicides and melanoma incidence were also compared with Queensland rates. Results: There were 4957 deaths among 164 622 men and 211 among 24 389 women. Overall mortality was lower than the national population for men (SMR 81 (95% CI 78 to 83)) and women (SMR 75 (95% CI 65 to 86)) and for all mine types. Mortality was significantly decreased for most death categories. Male suicide mortality was significantly increased compared with the national population, but not when compared with Queensland population rates. There were 5492 men and 406 women with cancer. Overall cancer incidence was higher than the national population for men (SIR 107 (95% CI 104 to 109)) but not for women (SIR 99 (95% CI 90 to 108)). There were increased risks for melanoma, lip, lung, bladder and gallbladder cancers compared with the general Australian population for men and women, but the numbers of women were small. When compared with Queensland rates, the overall risk of melanoma was not increased. Conclusions: Consistent with the healthy worker effect, overall

mortality was lower in this cohort. Cancer incidence was increased for men, but not women. The increased cancer risks highlight the need for further investigation.

Healy GN, Melendez-Calderon A, Kaab S, Bongers N, Heseltine KA, Yue CH, et al. Development, validation, acceptability and usability of a device-based system to measure sit-stand desk usage. *Applied Ergonomics*. 2025; 126:104490.

<https://doi.org/10.1016/j.apergo.2025.104490> [open access]

Abstract: We describe the development and testing (across three studies) of an open-source device designed to measure sit-stand desk usage: the Desk Positioning System (DPS). Accuracy of the DPS was assessed under prescribed (Study 1) and free-living (Study 2; video criterion) conditions, across multiple desk-types. Study 3 assessed usability and acceptability in the short-term (1-week) and longer-term (5-weeks). RESULTS: In Study 1, the DPS was 100% accurate at identifying most conditions (presence at desk 59/72 conditions, detecting desk height 166/168). In Study 2 (n = 10) the DPS demonstrated high accuracy (F1>0.95) and precision (>0.98) against the criterion (7866 observations). Study 3 participants (n = 23) reported high device acceptability in both the short- (mean [sd] 4.4/5 [SD 0.4]) and longer-term (4.6/5 [0.5]). Usability was above the 68-score industry benchmark at the short- (72.4/100 [14.2]) and longer-term (74.7/100 [18.5]). CONCLUSION: The DPS may provide an accurate, acceptable and useable way of understanding sit-stand desk usage.

Jones AM, Cousineau-Short YD, Galanakis C, Weiss D, and Hall AL. Cancer incidence in male and female Canadian Armed Forces personnel and Veterans enrolled between 1976 and 2016: a retrospective population-based cohort study. *Occupational and Environmental Medicine*. 2025; 82(2):90-97.

<https://doi.org/10.1136/oemed-2024-109924>

Abstract: Objectives: To describe rates of overall and type-specific primary cancers in Canadian Armed Forces (CAF) personnel and Veterans with a first enrolment in the CAF between 1976 and 2016, with comparisons to the Canadian general population (CGP). Methods: This retrospective cohort study linked CAF administrative data to national cancer registries. Primary cancer diagnoses were ascertained from 1976 to 2017. Using age, year and sex-specific rates from the CGP, SIRs and 95% CIs were calculated by sex for all cancers combined and specific cancer types. Subgroup analyses were conducted for service status, rank and international deployment. Results: Among 210 910 male and 34 940 female CAF personnel and Veterans, 6415 and 1620 incident primary cancer cases were observed, respectively. For cancers overall, CAF personnel and Veterans had lower or similar risk compared with the CGP. Subgroup analyses indicated lower or similar risk compared with the CGP for most cancer types but elevated risk for melanoma in male and female personnel, officers, deployers and male senior non-commissioned members (NCMs); lung and bronchus cancer in male and female junior NCMs; pancreatic cancer in male junior NCMs; testicular cancer in male officers; and cervical cancer in female junior NCMs and non-deployers. Conclusion: CAF personnel and Veterans had lower or equal rates of cancer overall compared with the CGP. Elevated rates were observed for certain cancers within subgroups. Further research to examine time trends and risk factors for cancer outcomes in this population is recommended.

Kim W, Juarez SP, Dunlavy A, Drefahl S, and Aradhya S. Labor market disadvantages and mental health among the second-generation children of immigrants in Sweden. A population cohort study. *Social Science & Medicine*. 2025; 371:117866.

<https://doi.org/10.1016/j.socscimed.2025.117866> [open access]

Abstract: Children of immigrants born in the host country—the second generation (G2)—face higher risks of unemployment and overqualification compared to the majority native population in Western Europe. While the health effects of unemployment and overqualification are well documented, it remains unclear whether these factors impact the mental health of the G2 in the same way as in the majority population. This study uses Swedish register data to examine the association between different labor market disadvantages, i.e., unemployment and overqualification, and mental health outcomes among the G2 and the majority population. The outcome was measured as time to the first prescription of psychotropic medications (anxiolytics, sedatives, hypnotics, and antidepressants). Descriptive findings showed that psychotropic prescription rates are higher among G2 groups compared to the majority population. Cox proportional hazards models, adjusted for demographic and socioeconomic factors, indicated that unemployment similarly impacts mental health across origin groups, suggesting that being unemployed does not contribute to the mental health inequality between the G2 and the majority population. G2 individuals, especially G2 European individuals, showed higher risks of psychotropic prescriptions across all employment types. These findings imply that improving the labor market position is not sufficient to address mental health inequalities between the G2 and the majority population

Liu Y and Li Y. Does human-AI collaboration promote or hinder employees' safety performance? A job demands-resources perspective. *Safety Science*. 2025; 188:106872.

<https://doi.org/10.1016/j.ssci.2025.106872>

Montani F, Radanielina-Hita ML, Lussier B, and Vandenberghe C. Job insecurity and psychological distress during the COVID-19 pandemic: the role of mindfulness and psychological capital. *International Journal of Stress Management*. 2025; 32(2):123-137.

<https://doi.org/10.1037/str0000350>

Qin X, Yao M, Luo X, Liu J, Ma Y, Liu Y, et al. Machine learning for identifying randomised controlled trials when conducting systematic reviews: development and evaluation of its impact on practice. *Research Synthesis Methods*. 2025; 2025/03/21(2):350-363.

<https://doi.org/10.1017/rsm.2025.3> [open access]

Abstract: Machine learning (ML) models have been developed to identify randomised controlled trials (RCTs) to accelerate systematic reviews (SRs). However, their use has been limited due to concerns about their performance and practical benefits. We developed a high-recall ensemble learning model using Cochrane RCT data to enhance the identification of RCTs for rapid title and abstract screening in SRs and evaluated the model externally with our annotated RCT datasets. Additionally, we assessed the practical impact in terms of labour time savings and recall improvement under two scenarios: ML-assisted double screening (where ML and one reviewer screened all citations in parallel) and ML-assisted stepwise screening (where ML flagged all potential RCTs, and at least two reviewers subsequently filtered the flagged citations). Our model achieved twice the precision compared to the existing SVM model while maintaining a recall of 0.99 in both internal and external tests. In a practical evaluation with ML-assisted double screening, our model led to significant labour time savings

(average 45.4%) and improved recall (average 0.998 compared to 0.919 for a single reviewer). In ML-assisted stepwise screening, the model performed similarly to standard manual screening but with average labour time savings of 74.4%. In conclusion, compared with existing methods, the proposed model can reduce workload while maintaining comparable recall when identifying RCTs during the title and abstract screening stages, thereby accelerating SRs. We propose practical recommendations to effectively apply ML-assisted manual screening when conducting SRs, depending on reviewer availability (ML-assisted double screening) or time constraints (ML-assisted stepwise screening)

Sawyer-Morris G, Ulukaya M, Kushmerick-McCune B, Clark KJ, Bruce J, Gatzke S, et al. Advancing research translation in addiction and pain: a portfolio analysis of the NIH HEAL initiative. *Journal of Clinical and Translational Science*. 2025; 9(1):e92.

<https://doi.org/10.1017/cts.2025.68>

Abstract: BACKGROUND: To date, the NIH Helping to End Addiction Long-term (HEAL) Initiative has funded over 1,000 projects that aim to identify new therapeutic targets for pain and substance use disorder (SUD), develop nonpharmacological strategies for pain management, and improve overdose and addiction treatment across settings. This study conducted a portfolio analysis of HEAL's research to assess opportunities to advance translation and implementation. METHODS: HEAL projects (FY 2018-2022) were classified into early (T0-T1) and later (T2-T4) translational stages. Eleven coders used a 54-item data collection tool based on the Consolidated Framework for Implementation Research (CFIR) to extract project characteristics (e.g., population, research setting) relevant to translation and implementation. Descriptive statistics and visualization techniques were employed to analyze and map aggregate characteristics onto CFIR's domains (e.g., outer setting). RESULTS: HEAL's portfolio comprised 923 projects (33.7% T0-T1; 67.3% T2-T4), ranging from basic science (27.1%) and preclinical research (21.4%) to clinical (36.8%), implementation (27.1%), and dissemination research (13.1%). Most projects primarily addressed either addiction (46.3%) or pain (37.4%). Implementation-related gaps included the underrepresentation of certain populations (e.g., sexual/gender minorities: 0.5%). T0-T1 projects occurred primarily in laboratory settings (35.1%), while T2-T4 projects were concentrated in healthcare settings (e.g., hospitals: 21.6%) with limited transferability to other contexts (e.g., community: 12.9%). CONCLUSION: Opportunities to advance translational and implementation efforts include fostering interdisciplinary collaboration, prioritizing underserved populations, engaging with community leaders and policy stakeholders, and targeting evidence-based practices in nonclinical settings. Ongoing analyses can guide strategic investments to maximize HEAL's impact on substance use and pain crises

Teegardin MM, Kelly NB, Zoughaib WS, Wilson MA, Veith A, Kleinschmidt V, et al. Identification and prevention strategies for musculoskeletal injuries among firefighters: a rapid review. *Work*. 2025; 81(1):2057-2067.

<https://doi.org/10.1177/10519815251316226>

Abstract: Background: Firefighters worldwide play a critical role in safeguarding the public and their work exposes them to significant health and safety risks. The physical demands of firefighting such as fire suppression, victim rescue, and operating in confined, hazardous environments are compounded by the weight of personal protective equipment (PPE) and self-contained breathing apparatus (SCBA). These demands contribute to a high prevalence of musculoskeletal injuries (MSIs). MSIs result in extended recovery times, with firefighters often taking twice as long to return to work compared to

other sectors. Objective: To conduct a rapid review in support of an industry partner to explore the prevalence and patterns of musculoskeletal injuries among firefighters, identifying gaps in the literature and proposing strategies for injury mitigation. Methods: A rapid review of peer-reviewed literature, concluding in March 2024, identified a gap in research focusing on the prevention of work-related injuries in firefighters. Results: The review highlights the urgent need for targeted prevention strategies, including fitness, health, and wellness programs, as well as enhanced safety training and improved PPE. The financial burden of non-fatal injuries on fire departments underscores the importance of such preventative measures. Future research should explore the effectiveness of exercise and movement-oriented training programs, particularly among diverse populations, including female and older firefighters. Conclusion: Longitudinal studies are needed to evaluate the long-term benefits and cost-effectiveness of these interventions. A deeper understanding of MSI prevention could lead to the development of specific guidelines that enhance the safety and well-being of firefighters throughout their careers

Urrejola-Contreras GP, Perez MA, Herrera-Miranda F, Lopez B, Gary Zambra B, and Hernandez Perez K. Adaptations in the workplace as a labor inclusion strategy for people with physical disabilities: an integrative review. *Work*. 2025; 80(3):962-973.

<https://doi.org/10.1177/10519815241289677>

Abstract: Background Based on the International Classification of Functioning, disability entails a problem in participation, and work activity is a pillar for inclusion. The success of labor inclusion will depend on the labor adaptations that are adopted. Discrimination in the workplace remains one of the biggest obstacles to effective inclusion. Objective Analyzing the evidence associated with workplace adaptations as an inclusion strategy for people with physical disabilities Methods Literature published between 2012 and 2023 in English and Spanish. The databases were examined: Science Direct, Scopus, Taylor & Francis and free search and 10 articles were included to prepare this integrative review. The methodological quality followed the recommendations of the Equator network. Results Most of the changes were organizational and accessibility related to flexible hours, the adoption of teleworking, the availability of elevators, preferential parking and adaptations in bathrooms. The main shortcomings reported were limitations in evaluating jobs, productivity costs and effectiveness of adjustments, redesigning tasks and managing disability in the work environment. Conclusions Although there are international efforts aimed at improving the inclusion of people with disabilities in the workplace, the results are asymmetrical between accessibility and support. The development of reasonable accommodations in the workplace in pursuit of employment rights is still in its early stages

Zajacova A and Margolis R. Trends in disability and limitations among US adults aged 18-44 years, 2000-2018. *American Journal of Epidemiology*. 2025; 194(5):1381-1388.

<https://doi.org/10.1093/aje/kwae262> [open access]

Abstract: Understanding disability trends is critical for health care and social policy. Although trends in disability and limitations have been studied extensively among older and middle-aged adults, little is known about trends in younger Americans, despite their importance for current and future population health. We present the first comprehensive evidence on disability trends among US adults age 18-44. We analyze 20 measures of disability and limitations collected in the nationally representative National Health Interview Survey 2000-2018 (n = 261 505). Robust Poisson models

estimate age- and sex-adjusted trends and their covariates. Over one-quarter (27.4%) reported at least 1 disability or limitation; the age-adjusted prevalence increased by 5% from 2000 to 2018. However, trends for specific disabilities and limitations varied tremendously. Activities of daily living and instrumental activities of daily living limitations, cognitive, and social disabilities increased steeply (by 65%-89% over the study period). Mobility limitations were generally unchanged or increased modestly. Hearing and "other" limitations decreased significantly (25%-48% decrease). The trends are only partly explained by education, health behaviors, chronic conditions, and other covariates. Disability trends research must not be limited to older adults. Researchers and policy makers interested in health care policy, planning, and caregiving should pay attention to disability trends among young adults in the United States.

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