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

**\*Robson LS, Chen C, Mustard CA, Shahidi FV, Landsman V, Smith PM, Biswas A. Differences in the effectiveness of three OHS training delivery methods. American Journal of Industrial Medicine. 2025; [epub ahead of print].**

<https://doi.org/10.1002/ajim.23719> [open access]

**Abstract:** Background: Methods of delivering occupational safety and health (OSH) training have shifted from in-person to online. Widespread delivery of a standardized OSH training course in three modalities in the province of Ontario, Canada allowed measurement of differences in their effectiveness. Methods: Learners (N = 899) self-selected into face-to-face (F2F) instructor-led learning, online instructor-led synchronous distance learning, or online self-paced e-learning. Pre- and post-training surveys collected information on knowledge and other measures. Multiple regression analyses compared modalities on knowledge achievement (0%-100% scale; the primary outcome), engagement, perceived utility, perceived applicability, self-efficacy, and intention-to-use. Results: F2F learners achieved a statistically significant 2.5% (95% CI: 0.3%, 4.7%) higher post-training knowledge score than distance learners (Cohen's d = 0.23, which is considered small). A statistically insignificant difference of 0.4% (95%: -1.4%, 2.3%) was seen between e-learners and distance learners. Collaborating training providers regarded these differences as not meaningful in practice. Statistically significant differences between modalities were seen for engagement, perceived utility, and self-efficacy. Scores of F2F learners were more favorable than scores of distance learners, which were, in turn, more favorable than scores of e-learners. Conclusions: This study provides evidence that there are small to no differences among F2F, distance and e-learning in their ability to ensure knowledge achievement among learners. This finding is likely generalizable to other well-designed short-term OSH training aimed at acquiring new knowledge. More research is needed to understand whether

there are important differences across these modalities in basic OHS skill acquisition and transfer of learning to the workplace.

**Alaca N, Acar AO, and Ozturk S. Low back pain and sitting time, posture and behavior in office workers: a scoping review. *Journal of Back and Musculoskeletal Rehabilitation*. 2025; [epub ahead of print].**

<https://doi.org/10.1177/10538127251320320>

**Abstract:** Background Office workers spend approximately two-thirds of their daily work time in a sitting position. Objective This scoping review aimed to identify and categorize key themes and knowledge gaps in research on how sitting time, posture, and behavior affect the risk of low back pain among office workers. Methods The authors conducted a comprehensive literature search in electronic databases [MEDLINE [via PubMed], SCOPUS, CINAHL, PEDro, and CENTRAL] from inception to March 2024, resulting in 22 studies involving 7814 participants. The methodological quality of these studies was assessed using the Mixed Methods Appraisal Tool (MMAT). Results Seventeen studies [77%] were rated as high quality, four studies [18%] as moderate quality, and one study [5%] as low quality. Thirteen studies assessed sitting time, ten assessed sitting posture, and thirteen assessed sitting behavior. Among the studies investigating sitting time, five showed no relationship with low back pain (LBP) prevalence, while eight demonstrated a relationship with LBP prevalence. For studies exploring sitting posture, seven found a relationship with LBP. Regarding studies on sitting behavior, only one showed no relationship between LBP prevalence, while twelve indicated a relationship. Conclusions Longer sitting time, poor sitting posture, fewer breaks and more static sitting in sitting behavior, were found to be associated with LBP. The strongest evidence for an association with LBP was found for sitting behavior. When considering workplace ergonomics and interventions for LBP, it is advisable to consider all factors, including sitting, posture and behavior

**Birch E and Preston A. Working at home and the gender wage gap. *Industrial Relations Journal*. 2025; 56(2):125-144.**

<https://doi.org/10.1111/irj.12456> [open access]

**Abstract:** ABSTRACT This paper examines the impact of working at home on the wages of men and women using cross-sectional and panel data from Australia. The results show that working at home helps narrow the gender wage gap. A concerning finding is that fathers who work at home earn significantly less than other men who work at home. Policy implications are discussed

**Brunero S, Tetik E, Donnelly N, and Lamont PS. Understanding the experience of workplace violence in hospitals as documented by nursing staff: using the READ approach. *Workplace Health & Safety*. 2024; 73(3):139-149.**

<https://doi.org/10.1177/21650799241282343> [open access]

**Abstract:** Background: Workplace violence has a significant impact on patients, families, and staff safety. Workplace violence can produce traumatic results for those involved; the importance of preventive measures needs to be paramount in health service policy and process. Health care staff are required to document their experiences of violent incidents after every occasion, usually via an incident reporting system, which allows for a free text description of the event. There is a lack of understanding of how health care staff document reports of violence and how they explain the events. Methods: This study aims to determine the circumstances surrounding workplace violent

events as documented by health care staff. The four-step Review, Extract, Analyze, and Document (READ) approach to document analysis was used to examine workplace violence incident reports over 12 months (September 2021-September 2022) in a tertiary referral hospital. Findings: Six categories of workplace violence were found: (a) "Escalation Dynamics"-patterns and progression of how violence incidents intensify; (b) "Warning Behaviors"-verbal or non-verbal signals that may foreshadow physical violence if not addressed; (c) "Authoritative Institutional Interventions"-how aggression correlates to protocols involving security personnel or law enforcement; (d) "Care Delivery Methods"-how certain treatment procedures and approaches might inadvertently elicit violence; (e) "Situational Stressors"-external circumstances or changes that act as triggers for violence; and (f) "Unprovoked triggers"-sudden and seemingly unprovoked violent outbursts. Conclusions and application to practice: Workplace violence in health care is a multifaceted interplay of events with the nurse involved in all aspects of the process. These findings can be used by occupational health nurses in education and policy development. The findings can be used to focus education on how violent incidents may escalate and provide more opportunities for de-escalation by health care staff.

**Etli D, Wiewior A, Malone A, Locke K, Bullock N, and Howard R. The impact of SARS-CoV-2 on work absence: a cross-sectional analysis of vaccinated and unvaccinated workers. *Journal of Occupational & Environmental Medicine*. 2025; 67(3):e139-e151.**

<https://doi.org/10.1097/JOM.0000000000003289>

Abstract: OBJECTIVE: The aim of the study was to compare SARS-CoV-2 infection and work absence rates between vaccinated and unvaccinated employees during a 2-year pandemic period. METHODS: This is a cross-sectional study with 2107 participants. Primary outcomes were as follows: total days missed; and main exposure: vaccination status. Analyses included t tests to compare absence days and analysis of variance to evaluate confounders. Mixed-effects logistic regression assessed infection risk, incorporating community prevalence as a fixed effect and work location as a random effect. RESULTS: Vaccinated employees missed slightly fewer days (0.16 days), though not statistically significant (  $P = 0.574$ ). Symptom severity and job status were linked to higher absenteeism. Vaccination had a small but significant protective effect (  $P = 0.045$ ). Remote work correlated moderately with reduced absenteeism. CONCLUSIONS: Vaccination lowered infection risk but not absenteeism due to uniform quarantine policies. Remote work reduced absenteeism and should be integrated into future interventions to support vulnerable workers

**He Y, Li J, Yu M, and Guo Y. Path analysis of coal mine accident risk factors based on the 24Model. *International Journal of Occupational Safety & Ergonomics*. 2025; 31(1):45-58.**

<https://doi.org/10.1080/10803548.2024.2403276>

Abstract: OBJECTIVES: Coal mine accidents seriously affect China's coal safety production and sustainable development. The present study aimed to reveal the risk factors in coal mine accidents and explore the causal relationship among risk factors. METHODS: This study utilized text mining to analyse 450 coal mine accident reports, identifying 50 risk factors and efficiently mapping them into the 24Model. The association rule algorithm was then used to mine the strong association rules among the risk factors within the 24Model, establishing the interaction mechanism among them. Based on the strong association rules, related hypotheses were proposed. Finally, the hierarchical and logical relationships of risk factors within the 24Model were analysed, and the causal and mediating effects were tested by path analysis. RESULTS: The safety management system has a direct effect on

unsafe acts, unsafe conditions, habitual behaviour and organizational safety culture. Moreover, external influence has an effect on unsafe acts, organizational safety culture and habitual behaviour through the mediating effect of the safety management system. **CONCLUSION:** Based on the results obtained, this study proposes a series of specific measures to prevent risks in coal mines, providing a new perspective for the analysis and prevention of accidents

**Leverentz CM, Salvati B, Moore C, Shin J, Qi Y, and Jewell VD. Telehealth lifestyle pilot study for improving occupational performance in older adults. OTJR. 2025; 45(2):209-218.**

<https://doi.org/10.1177/15394492241284566> [open access]

Abstract: Occupation-centered lifestyle interventions improve health and delay age-related declines in older adults; however, little is known about the impact of a brief telehealth lifestyle program delivered individually. This pilot investigated the Holistic Occupational Performance Empowerment (HOPE) program on occupational performance and health-related quality of life. Twelve community-dwelling older adults completed six weekly lifestyle sessions to enhance behavior change toward individualized health goals. Goal Attainment Scaling (GAS) and the Short Form 20-Item Survey (SF-20) were administered preintervention and postintervention to measure program outcomes. Among 36 health-related goals, 69.4% achieved or exceeded the expected level of attainment. A paired samples t-test revealed statistically higher posttest GAS scores compared with pretest scores, indicating significant improvements in occupational performance. SF-20 mental health scores increased postintervention, although not significantly. Preliminary findings suggest that HOPE could positively impact occupational performance in community-dwelling older adults warranting a future large-scale randomized controlled trial

**Liu L, Li J, Guo F, and Man SS. The effect of occupation-related and worker-related factors on upper limb disorders using strain index among O\*NET jobs. International Journal of Industrial Ergonomics. 2025; 106:103701.**

<https://doi.org/10.1016/j.ergon.2025.103701>

**Marsh E, Orr R, Canetti EFD, and Schram B. Profiling paramedic job tasks, injuries, and physical fitness: a scoping review. Applied Ergonomics. 2025; 125:104459.**

<https://doi.org/10.1016/j.apergo.2024.104459> [open access]

Abstract: **INTRODUCTION:** The aim of this review was to identify, collect, appraise, and synthesise research profiling paramedic job tasks, injuries sustained, and current fitness levels, to guide optimal workplace performance and enhance injury mitigation efforts. **METHODS:** Following the Preferred Reporting Items for Scoping Reviews, four databases (PubMed, SPORTdiscus, CINAHL, and Embase) were searched using key search terms (derivatives of 'paramedic' and 'injury', 'physical fitness' and 'tasks'). Identified records were screened against eligibility criteria with remaining studies critically appraised. **RESULTS:** Of 1675 identified records, 33 were retained. Musculoskeletal injuries exhibited the highest mean injury rate, with sprains and strains the predominant nature of injury, and the back the most frequently injured body part. Among paramedics, handling stretchers and equipment posed the most challenging tasks while for Emergency Medical Services patient extraction was the most physically and mentally demanding task. Male paramedics were generally stronger with more muscular endurance, but less flexibility, than female paramedics. Older paramedics displayed lower levels of strength and flexibility. **CONCLUSION:** Tasks involving stretcher handling and patient

extraction are reported as being most strenuous for paramedics leading to musculoskeletal injuries, particularly sprains, strains, and back injuries

**Mikucka M, Arranz Becker O, and Worl C. Short- and long-term health effects of job insecurity. Fixed effects panel analysis of German data. *Scandinavian Journal of Work, Environment & Health*. 2025; 51(2):68-76.**

<https://doi.org/10.5271/sjweh.4206> [open access]

**Abstract:** OBJECTIVE: Previous research has linked job insecurity to health deterioration. The risk accumulation model suggests that health effects of job insecurity may persist even after job security is restored, yet long-term empirical analyses are scarce. Our study evaluates the long-term effects of accumulated exposures to affective job insecurity on mental and physical health among the working-age population in Germany. METHOD: Using data from the German Socioeconomic Panel (12 624 individuals; 84 219 observations), we applied panel regression models with individual fixed effects to assess short- and long-term health changes associated with affective job insecurity. Job insecurity was measured by respondents' worries about job security. Mental and physical health was recorded with the SF-12 scale. RESULTS: Job insecurity correlated with short-term worsening in mental and physical health. However, after job insecurity ceased, health recovery was incomplete resulting in a long-term health deterioration. The long-term effects were larger among respondents who accumulated more instances of job insecurity, and showed a similar pattern for mental and physical health. An additional analysis documented stronger health effects of job insecurity among lower educated persons. CONCLUSION: Our study is one of the first to empirically demonstrate the negative long-term health effects of job insecurity. Our findings for a well-protected labor market like Germany's, suggest that the health risks associated with job insecurity may be substantial and potentially underestimated by studies that focus solely on short-term effects

**Munoz-Poblete C, Inostroza J, and Carranza-Leiva J. Biomechanical risk factors and subacromial pain provocation in healthy manufacturing workers. *International Journal of Occupational Safety & Ergonomics*. 2024; 30(4):1031-1037.**

<https://doi.org/10.1080/10803548.2024.2371210>

**Abstract:** Objectives. Work-related musculoskeletal disorders (MSDs) of the shoulder may manifest subclinically. By combining risk assessment and clinical instruments, it may be advisable to recognize workers who may develop more complex MSDs early. This study aimed to evaluate the relationship between biomechanical risk factors and subacromial pain provocation in healthy manufacturing workers. Methods. A cross-sectional descriptive observational study was carried out with workers in the furniture manufacturing industry. The occupational repetitive action (OCRA) checklist was applied to detect risk factors and three clinical tests used to detect subacromial tissue reactivity: the supraspinatus test, the painful arc test and the Hawkins-Kennedy test. Results. The positivity of the clinical tests is higher in the supraspinatus test, followed by the Hawkins-Kennedy test, and lowest in the painful arc test, for both the right and left shoulders. No significant associations were found with the overall OCRA checklist index or specific biomechanical factors. Conclusion. The biomechanical risk factors and the provocation of subacromial pain reviewed in this study were not found to be related. Other physical tests that are more sensitive and adapted to workers at risk of developing musculoskeletal shoulder disorders should be explored

**Oakman J, Macdonald WA, McCredie K, and Clune S. Impact of work-related psychosocial versus biomechanical hazards on risk of musculoskeletal disorders: a systematic review and meta-analysis. *Applied Ergonomics*. 2025; 125:104481.**

<https://doi.org/10.1016/j.apergo.2025.104481> [open access]

**Potter RE, Foley K, Richter S, Cleggett S, Dollard MF, Parkin A, et al. National review into work conditions & discrimination for pregnant and parent workers in Australia. *Safety Science*. 2025; 186:106830.**

<https://doi.org/10.1016/j.ssci.2025.106830> [open access]

Abstract: Pregnant and parent workers represent a substantial proportion of the workforce. Previous research has shown that these workers experience high levels of workplace discrimination, which can lead to adverse effects on mental health. There is a pressing need for up-to-date evidence regarding the specific types of self-perceived discrimination, disadvantage, and bias encountered by pregnant and parent workers. As such, this paper presents findings from a national study of 1048 workers across Australia who completed a comprehensive online survey. Overall, 89% of respondents reported experiencing work-related self-perceived discrimination, disadvantage and/or bias during pregnancy, 84.7% during parental leave and 91.8% during their return-to-work phase. Analysis revealed high prevalence rates for various forms of self-perceived discrimination, disadvantage and bias pertaining to aspects such as—but not limited to—accessing leave entitlements, breastfeeding facilities, and career progression opportunities. Future research must prioritise understanding the disconnect and de-coupling between Australian anti-discrimination legislation, workplace action (i.e., policy implementation) and these reported experiences from pregnant and parent workers; with respect to the underlying factors that open and sustain this disconnect. Exploring the conditions that have contributed to this disconnection is critical for ensuring worker safety during pregnancy and parenting.

**Rosemberg MS, Ghosh B, Jun J, Armijo J, and Marriott DJ. Psychosocial stress at work and risks for burnout among hotel workers. *Journal of Occupational & Environmental Medicine*. 2025; 67(3):223-227.**

<https://doi.org/10.1097/JOM.0000000000003280>

Abstract: OBJECTIVE: Hotel workers are at risk for burnout. We tested the association between effort-reward imbalance (ERI) and burnout. METHODS: Participants were recruited through social media and completed an online survey. ERI and burnout were analyzed using an adjusted multivariable regression model. RESULTS: Two hundred twenty-four hotel workers were surveyed. Eighty-three percent were female, 38% were guest room attendants, and 19% were in leadership. Most were White (62%), nonunionized (78%), and worked full-time (76%). The mean age was 39.4 (SD = 13). The mean burnout score was 41.8 (SD = 6.6, range of 20.0-59.0). 50.5% of participants reported high ERI, especially among leadership, food workers, and guest room attendants. CONCLUSIONS: High ERI was associated with higher burnout. Older age was associated with reduced burnout. Hotel workers experience high levels of stress. Targeted interventions are necessary to foster coping and mitigate risk factors

**Sijbom RBL, Emanuel ES, Koen J, Baas M, and De Schutter L. Daily knowledge sharing at work: the role of daily knowledge sharing expectations, learning goal orientation and task interdependence. *European Journal of Work and Organizational Psychology*. 2025; 34(2):298-314.**

<https://doi.org/10.1080/1359432X.2025.2458343> [open access]

Abstract: Knowledge sharing is vital for organizational success. Yet, most research treats it as a static behaviour, overlooking its fluctuations within individuals over time. Drawing on role theory and a cost-benefit framework, we argue that knowledge sharing expectations conveyed by supervisors and co-workers on a given day positively predict employees' actual knowledge sharing on that day. Furthermore, we propose that learning goal orientation and task interdependence - key between-person characteristics - moderate this within-person relationship. We tested these hypotheses in two preregistered 10-day diary studies among UK employees (Study 1: 557 daily surveys from 101 respondents; Study 2: 401 daily surveys from 88 respondents). The results showed that daily knowledge sharing expectations are positively related to employees' daily knowledge sharing, with the strongest effect size for co-worker knowledge sharing expectations. While perceived task interdependence did not moderate this day-level relationship, learning goal orientation showed varying moderating effects across studies: At higher levels of learning goal orientation, the positive day-level relationship was stronger in Study 1 but weaker in Study 2. Our study offers novel insights into the short-term nature of knowledge sharing and its boundary conditions, highlighting the importance of both daily knowledge sharing expectations and individual differences in shaping knowledge sharing in organizations

**Souza DO, Rosales Flores RA, de Magalhaes APN, Pereira Abagaro C, da Silva Cruz SAF, and Ericson S. Risks, demands, and health damages faced by nursing workers in confronting Covid-19. *Theoretical Issues in Ergonomics Science*. 2025; 26(2):217-228.**

<https://doi.org/10.1080/1463922X.2024.2405681>

**Tucker S, Du Y, Ahmed R, Haynatzki G, Adhikari S, and Rautiainen RH. Dermal exposure to agrochemicals as risk factor for skin cancer in farmers and ranchers in the US central states. *American Journal of Industrial Medicine*. 2025; 68(3):286-294.**

<https://doi.org/10.1002/ajim.23696> [open access]

Abstract: Background: Farm operators are at a high risk of developing skin cancer due to their occupational sun exposure. With the growing incidence of skin cancer, it is also important to evaluate other occupational risk factors. Farm operators confront numerous physical, chemical, and biological hazards in their work environment. This study investigated whether dermal exposures to pesticides/fertilizers, animals/livestock, detergents/disinfectants, and fuels/solvents/paints were associated with the risk of skin cancer in farm and ranch operators. Methods: Surveillance data from the Central States Center for Agricultural Safety and Health (CS-CASH) Farm and Ranch Health and Safety Surveys in 2018 and 2020 were used to explore the risk of skin cancer in farm operators in seven US central states. Farm production variables from the DTN Farm Market database were merged with survey responses. The associations of skin cancer and exposure variables were analyzed using descriptive statistics and regression modeling. Results: The prevalence of skin cancer was 10% among 7943 operators. Univariable analyses showed that men had 1.62 times higher odds of skin cancer compared to women. The odds of skin cancer increased significantly with age. Livestock, fed cattle, cow-calf, and beef production increased the odds of skin cancer. Exposure to pesticides/fertilizers and

fuels/solvents/paints also increased the odds of skin cancer compared to unexposed operators. In the final multivariable model, the associations of skin exposure to pesticides/fertilizers (odds ratio (OR) = 1.30, 95% CI: 1.08-1.56) and to fuels/solvents/paints (OR = 1.21, 95% CI: 1.01-1.45) remained statistically significant after adjusting for sex, age, and state. Having livestock also increased the odds of skin cancer (OR = 1.18, 95% CI: 1.00-1.38). Conclusion: Skin is a critical source of occupational exposures among farm operators. Increased odds of skin cancer in this study emphasizes the need for better protection against exposures to chemicals including pesticides/fertilizers, and fuels/solvents/paints.

**Yamashita S, Okawara M, Miyake F, Ishimaru T, Fujimoto K, Nagata M, et al. Effect of annual leave days on presenteeism: a cohort study in employees of a Japanese corporate group. *Journal of Occupational & Environmental Medicine*. 2025; 67(3):e175-e180.**

<https://doi.org/10.1097/JOM.0000000000003297>

Abstract: OBJECTIVE: This study investigated the association between leave use and improvement of work functioning impairment affecting presenteeism. METHODS: A prospective, observational study was conducted among 5752 employees in a single corporate group in Japan to analyze the number of days of leave taken over a 1-year period and changes in work functioning impairment. RESULTS: As the number of leave days increased, work functioning impairment improved significantly. CONCLUSIONS: These results suggest that allowing employees to take more leave significantly contributes to improving work functioning impairment. Companies need to promote appropriate leave use to improve employee health and overall work productivity

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